THE ROLE OF INTUITIVE INTELLIGENCE IN LEADERSHIP STRATEGIC DECISION MAKING: A FRAMEWORK FOR INTUITIVE INTELLIGENCE - A QUALITATIVE STUDY

by

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Dedication

I would like to dedicate this research report to:

***

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My wonderful husband Dev (Cyril) and incredible daughter Suria Devi;
thank you for walking this path with me.

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Learner Declaration

I, R. Subiah confirm that this DBL research study is my own work.

Preparation for DBL

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ABSTRACT

The purpose of this study is to define Intuitive Intelligence and identify the role of Intuitive Intelligence in Leadership Strategic Decision Making. The study provides a framework for Intuitive Intelligence within the context of leadership strategic decision making.

Empirical study: The study used a dual phased research design, which included qualitative mixed methods; deconstruction, grounded theory, triangulation, and the use of Atlas ti.

Research Limitations / Implications: This study would be enhanced by future studies using an extended scope. Suitable testing and assessment methods would also offer a suitable quantitative perspective.

Value / Benefit: The study serves to assist executives' awareness of factors enhancing decision making skills such as the utilisation of Intuitive Intelligence; as well as to highlight those risk factors which may inhibit effective strategic decision making.

Keywords: Intuitive Intelligence, Intuition, Leadership Strategic Decision making, Consciousness, Multiple intelligences, Wisdom.

Summary: The research study is focused on the role of Intuitive Intelligence in terms of effective leadership strategic decision making. Rooted within the epistemological context of Leadership, Complexity and Chaos, Strategy as Practice, Knowledge Management, Sense making and Decision making, the focus is on the role of Intuitive Intelligence within such context. The research study contributes toward an understanding of how Intuitive Intelligence enhances the effectiveness of leadership strategic decision making; within the context of business leadership in South Africa, and strives to serve business leaders engaged in such strategic decision making.

Findings and conclusion: The findings support the case for the development, use and role of Intuitive Intelligence in terms of effectiveness of leadership strategic decision-making.

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Chapter One

In Chapter One, the problem context is identified and the business and academic problem is explored. The study context commences with the challenges confronting leaders in South Africa in the throes of change. It is argued that uncertainty, complexity, risk and the rate and pace of change demands effective leadership responses. Part of the leadership toolkit requires that decision making remain effective and yield competitive advantage albeit in the absence of part of the information. The postulate here is that this part information leads to the leaders' use of intuition to assist them in decision making. When decision outcomes are effective, 'a finely tuned Intuitive Intelligence', is lauded and applauded. However a *gap* exists in relation to the construct of Intuitive Intelligence itself, what it is, what are the components thereof, and how leaders use it in their decision making. This study uses this literary juncture as a departure point to frame the following research question: What is Intuitive Intelligence, and what role does it play in leadership strategic decision making?

Chapter Two and Three: Theoretical Foundation and Literature Review

Chapter Two offers a critical review of the theories that have a bearing on the research problem.

Chaos theory, Agency theory, Decision making theory, Intelligence Theory, Intuition and Intuitive Intelligence.

Theoretical foundation serves as a departure point for the literature review pertaining to intuition in leadership strategic decision making.

Chapter Four: Research Design and Methodology

Theory is defined as 'a set of systematically interrelated concepts, definitions, and propositions that are advanced to explain and predict phenomena' (as cited in the research guideline: "The preparation and writing of a dissertation / thesis; SBL DBL guideline document (2010). The

methodology chapter illustrates why the aim is to collect certain data and not others, exactly what data is collected, from where and when, as well as how the data is analysed with regard to reliability, validity, credibility, authenticity, sufficiency, and ethics.

Limitations of the study are indicated, as well as the process of data collection and analysis; including statistical analyses where applicable. The sample frame is described, as well as the various instruments used.

Chapter Five: Findings and Conclusions

Analyses and research results are unfolded. Statistical means used are accounted for, and applied techniques are referenced. The Process for analysing qualitative data is described as well as the description of tables, and diagrams and interpretation of the study's results. Findings are linked to the research objectives.

Chapter Six: Integrated Findings and Conclusions

Results of this study are discussed in terms of the body of knowledge.

Outcomes and research implications of this study are also cross referenced to other studies, and to the underlying theory.

Chapter Seven: Contribution and Recommendations.

The contribution of the study (and recommendations thereof) is unfolded.

CHAPTER ONE

PROBLEM IN CONTEXT

'Without having been through the daily grind of dealing with complex issues, making mistakes, and taking risks, (whether calculated or intuitive), discussing or debating the essential elements of leadership seems somehow to be academic'. (Gleason, et al., 2011: 1)

1.1 Introduction

The opening quote alludes to the extreme challenges experienced by business leaders in their ongoing efforts to guide their organisations through uncertain terrain. This study seeks to share these experiences. The quote also points to the experiential world faced by business leaders. Given the risks they face, it is thus crucial to generate solutions, take tough stands, and make effective strategic decisions.

1.2 Problem debriefed

In her book Change Masters, Kanter (1983), sought to caution leaders regarding these complex challenges and the consequent changes:

'Business organisations are facing a change more extensive, more far reaching in its implications, and more fundamental in its transforming quality than anything in the years between roughly 1890 and 1920'

(Kanter, 1983: 38)

Taking South Africa as a case in point, business leaders certainly came under fire as they encountered unprecedented challenges, much of which originated in the past (Nkomo, 2003). Post 1994 the country moved toward a new political and economic dispensation and thus business leaders found themselves squaring up to the macro challenges of a developing country with a mandate to join a global economy - the globalisation driver (Louw & Venter, 2006). Parallel challenges came from the pressure to move from post industrialisation to a Knowledge age (Storey, 2005). As the rate and

complexity of change increased, leaders had to respond to macro and micro internal and external challenges (Collins, 2001; Sanchez & Heene, 2004; Gleason, *et al.,* 2011). Furthermore, these challenges appeared to be constantly evolving as Jones (2004), cautions: *"'...the environment (that word again) we exist in today is different from earlier times in particular ways (more uncertainty, complexity, turbulence, rapid change, etc.)'"* (Jones, 2004: 504). In the South African context post 1994, one could argue that this comment has great significance for business leaders.

1.2.1 Industrial Age to the Knowledge Age Challenge

Given the pre-1994 exploitative business mindset and culture of formalized homogeneous solidarity, South African business at large appeared to reflect multiple challenges from a technological, political, labour, globalisation, and emerging market front (Louw & Venter, 2006; Shevel, 2009). While the global paradigm shifted from the Industrial age to the current 21st century knowledge age (Storey, 2005), South African business may conceivably have also trodden along a similar path. The argument is that the changes post 1994 impacted significantly on strategic areas in South African business. For example, a pre – 1994 organisational culture of command and control may have had to make way for contemporary business practice such as individualism, teamwork and project implementation (Gleason, Nkomo & De Jongh, 2011). Organisational goals may also conceivably have been exploitative in nature; organisational structures hierarchical and regimented; and leadership styles typically autocratic and transactional. The vogue by contrast, tends to be transformational in approach (Bass, 1990). Also the emerging organisational environment is largely supportive of empowerment, (Collins, 2004) careful recruitment and selection and knowledge value is currently promoted (Shrivastava, Huff & Dutton, 1997; Storey, 2005)

Moving to illustrate some specific challenges in the South African business arena; a finding in the Deloitte Business Management Survey in 2004 described how South African business leaders (fifty of them), *'"...identified earnings and shareholder returns as leading strategic objectives, but (that)*

these were not supported by clear revenue growth and cost reduction strategies in the survey. This was significant in indicating a serious 'disconnect' between strategy and execution.'" (Louw & Venter, 2006: 481).

Leadership challenges may also manifest in marketing, as advertising trends and branding need to be informed by sharp strategy, (Donham, 1922; Quelch, 1994; Rust & Oliver, 1994). Also, rising to the leadership challenges in marketing meant having to come to grips with innovative leadership (Gouillart & Sturdivant, 1994; Berthon & Pitt, 1996; Clancy, 1990; Berthon & Hulbert, 1999; McKenna, 1991; Levitt, 1975; 1993). Leadership thus needs to convey effectiveness, (Drucker, 1987); part of which involves marketing strategy (Drucker, 1985; Hulbert & Pitt, 1996; Porter, *et al.*, 2004), or it may lead to a decline in brand performance and business sustainability – the so-called 'disconnect' challenge (Louw & Venter, 2006: 481). So, what other challenges did leadership need to address in order to avoid equivalent disconnects or displays of leadership ineffectiveness?

1.2.2 Legislative challenges

Changing legislative and compliance drivers since 1994 have placed the collective South African business community under intense pressure. Examples of such are the Labour Relations Act 66 of 1995, Basic Conditions of Employment Act 75 of 1997, Skills Development Act 97 of 1998, Skills Development Levies Act 9 of 1999, Employment Equity Act 55 of 1998, King 111, Occupational Health and Safety Act 85 of 1993, and Regulations, Financial International Accounting Standards(FIAS) 37 of 2002, and the National Credit Act 34 of 2005; to name but a few. Each piece of legislation brought with it implications in areas of compliance, corporate governance and organisational expectations in terms of leadership response (Louw & Venter, 2006; Nkomo, 2009).

1.2.3 Corporate Governance, Organisational Ethics challenges

With corporate governance came the need for 'right' decisions and 'right' action. This has direct leadership reference in that it is 'board effectiveness'

not 'board structure' in the decision-making process that in the final analysis determines corporate performance (King, 2009). To illustrate, Leblanc & Gilles, (2003), describe the famous (or rather infamous) example of the Enron crisis in 2002. The issue of ethics in business decision making is also raised by Robbins & Hunsaker (2009), using examples of Kenneth Lay (Enron), and Martha Stewart's prosecution. Thus in terms of appropriate leadership response to contemporary challenges, the spotlight appears to focus more and more on the need for 'right' action and effective strategic decision making (Hawkey, 2009). Given the need for proper leadership response in terms of effective decision making, there are other challenges which need to be considered (Johnson, 2004).

1.2.4. Process technological and IT challenges

Further contemporary challenges arise in that business leaders need to take cognisance of process technological and information technology challenges. As MIT professor, Charles Vest (2005) observes: *"Exponential advances in knowledge, instrumentation, communication, and computational capabilities have created mind-boggling possibilities..."* (Vest, 2005). The significance of this statement is grave as it cautions that with global challenges escalating to a veritable head, the old way of doing things may no longer be enough (Vest, 2005). Leadership response is again called to the fore. Thus the implication for organisations within an emerging market economy is that a whole new way of thinking (more pressingly leadership thinking) is required to grasp, maintain and sustain competitive advantage, particularly in emerging markets such as South Africa (Gleason, *et al.*, 2011). The above changes have, for most part, beset the past three decades of the national and global business environment, and Mason (2006) explicates the reasons why the 'old' ways won't do. For example, the losses incurred by IBM and General Motors in 1992, as a result of a failure to adapt to changing times (Mason, 2006). Therefore, when a step change is required within the organisation, this, by implication, involves leadership thinking and behaviour. This means ergo; that effective strategic decisions need to be made in order to safeguard organisational sustainability, and at the very least; survival.

The implication taken further is that as the boundaries of leaders' decision making remit shifted out from the known, to the uncertain, and at times, to the unknown; leaders had to step out of their known tried and tested decision making modes, defaulting to intuition when faced with uncertainty, (Agor, 1989; Burke & Miller, 1999; Khatri & Ng, 2000; Gladwell, 2005; Duggan, 2007). However, extant literature does caution that baseline intuition, devoid of planning (Mintzberg, 1990), and related leadership tools (Mintzberg, 1987); may not be the ideal tool for leadership decision making (Miller & Ireland, 2000; Mintzberg, 2001). It does appear that given the loaded stakes riding on strategic decisions in organisations, the use of intuition alone in decision making appears problematic (Duggan, 2007).

1.2.5. Strategic Drift Challenge

Consider the business scenario of a country such as South Africa, in the throes of unprecedented change, faced with the enormity of the change from isolationist pariah status to emerging global market player, (Louw & Venter, 2006), with resultant macro environment politico – economic changes. Parallel this scenario alongside organisational changes reverberating through organisation type, structure, systems, paradigm, culture, and leadership. Such a scenario of unprecedented change and uncertainty would require leadership in organisations to respond in terms of coping with strategic drift, (Johnson, 2004). This scenario is mapped out in Figure 1.1.

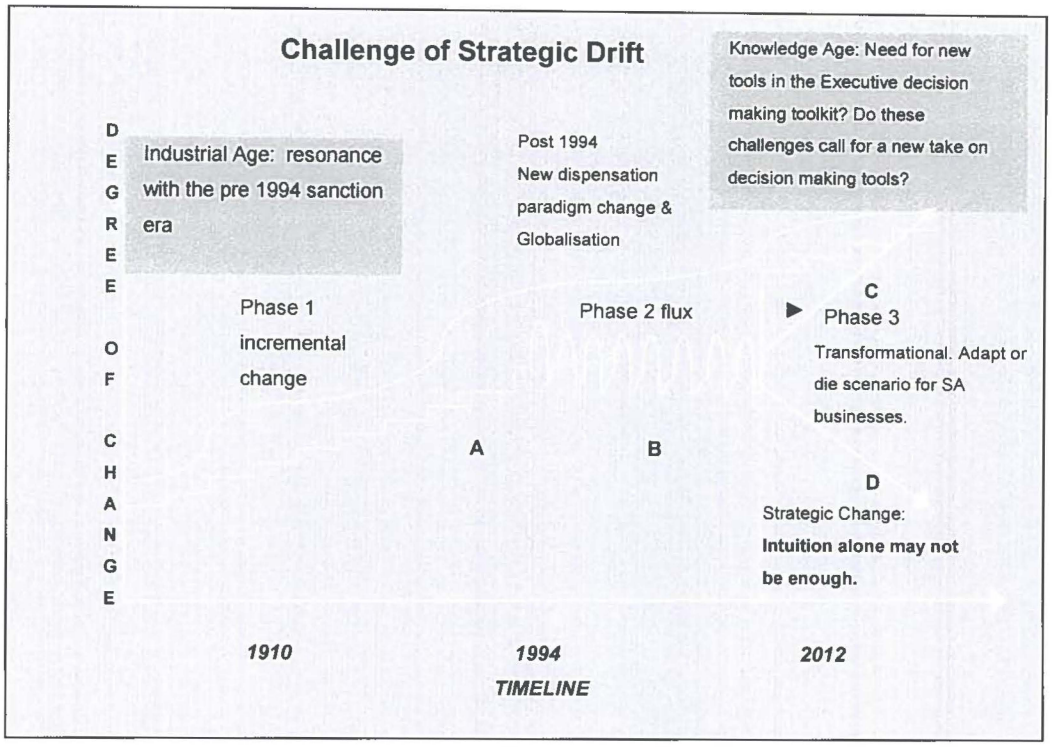

Fig 1.1 SA Business Strategic Drift.

Adapted from Johnson (2004:290)

After 1994, given the changes faced by the country and the South African business community, the challenge of strategic drift (Figure 1.1), may have loomed large and real, like the proverbial iceberg. It is interesting to reflect on the overlap between the transition in South Africa as a country with that of the globalisation business transition. This is layered also with another level of change - the shift from the Industrial to the Knowledge Age, (Point A to C) above. The strategic drift model above conceptually depicts the rate and complexity of change sweeping over SA Business. Point A in the graph could conceivably reflect the state of the nation prior to 1994 where SA business showed incremental change. This pattern may have changed dramatically after 1994 (Point B), where the rate and complexity of change may have called forth a transformational "adapt or die" (Phase 3).

At Point C, the need for Strategic change speaks to Leadership issues and related areas such as change management, organisational culture, and organisational learning. The schema also illustrates how the paradigm

change faced by the organisation impacts on the very survival of the organisation (adapt or die). Thus one may argue that South African business organisations were on the brink of the inception point depicted in Phase 3. Consequently the resulting emergent situation speaks to the dire need for new and effective leadership responses. Not merely of style 'Transactional versus Transformational', as in Bass (1990); or behaviour, but also to manifest in effective, holistic leadership decision making (Gleason *et al.,* 2011).

The premise that intuition is the default decision making tool for uncertain scenarios is well explicated and supported (Agor, 1989; Eisenhardt, 1989; Burke & Miller, 1999). However, there appears to be a flawed nature to intuition per se, as raised by Miller & Ireland (2005) which made it a problematic tool in decision making. What then was the "thin-slicing" intuitive ability (Gladwell, 2005: 23), which lead to effectiveness in intuitive decision making? Cued thus; the gap in knowledge in relation to what makes for effective intuitive decisions will be investigated in this study.

1.3 Research Problem – Effective leadership response

Given such turbulent times, how then did leadership respond effectively to macro and micro, internal and external organisational challenges? Those that did so effectively, Kanter, (1983) refers to as *'Change Masters: those people and organisations adept at the art of anticipating the need for, and the art of leading, productive change'* (Kanter, 1983: 13). These were leaders who clearly got their decision making right.

Given that *"'...organizations are affected by the environment according to the ways in which managers or leaders formulate strategies, make decisions, and implement them.'"* Tosi (2009: 201) the driver was clearly for leadership to do so effectively. As Peter Drucker (2006), pointed out; Efficiency is about knowing and *doing things right,* but the key is *effectiveness*, meaning that the *right things* must be done. Consequently, this study focuses on effectiveness in leaders' strategic decision making.

As early as 1993, Mintzberg argued that in terms of effective decision making, decision trees and analytical processes did not inevitably ensure success. The question thus re-asserts: if analytical as well as intuitive inputs in decision making can be flawed, how do leaders go about the process of making *effective* strategic decisions?

To investigate further, effective decisions clearly require a leader's solid foundational grasp of strategy and strategic issues. *A "'..strategic issue' is one which, (internal or external to an organisation), affects the organisation's ability to meet its objectives.'"* (Ansoff,1980:133; Mintzberg,1987; Huczynski,1992). This type of focus on strategic objectives means that organisations *decide* their response to challenges, (Miller & Vaughn, 2001). As evidence therefore suggests, it is clearly the role of leadership to direct such response and so steer the way (Handy, 2002).

According to Ansoff (1980:147), an *effective* "..strategic response" is ideally one which converts threats into opportunities. Ansoff offered a solution to package strategic issues in a manner which paved the way for effective leadership response (Ansoff, 1987). But in the tough economic and competitive environment of today what is it that makes for an effective leadership response?

Even as far back as the 1950's, Ansoff presented a paradigm by way of a leader's response to strategic issue management. Based on the French Euroquip system, it highlighted the importance of being alert to challenges from economic, political, technological and social fronts. Capabilities which may have been disguised previously as weaknesses were also pointed out as a potential source of strength.

Ansoff (1980) uses the example of a 'weakness' such as lack of tight cost controls and strong lines of hierarchical authority, which even if previously inhibited organisational efficiency, may actually become a strength, if the new opportunities demanded speedy organisational response and entrepreneurial risk taking (Ansoff, 1980). However, the amount of risk taking that an organisation can encompass in its strategy is also dependent on the organisational cultural context. In terms of culture, and indeed change management, Ansoff (1987) proposes a strategic paradigm where 'context counts', Ansoff (1987: 501), taking into account 'culture, structure and performance' (Kanter, 1983: 23).

In describing how organisations adapted to their external environment, a specific example from the 1980's, shows how changes in the US automotive industry came about not just from US legislation, but also from Japanese competition. One may argue that this was an example where strategy and culture (albeit a rigorous Japanese work ethic and culture), created a capability which was vital in creating competitive advantage, and the ability to manage change. Consequently, when faced with change in an organisation, it appears that less reliance on past responses and more focus on effectiveness become crucial. As Kanter also observes, *"This new context for corporate America makes past responses less effective..."* (Kanter, 1983: 35). Leadership thus needs to respond on cue, as indicated by Ray (2005). This involves the role of the leader as strategic change agent. In fact, Balogun & Hailey (1999) pin the very success of strategic change on a key pivotal leader, (MD / CEO or senior manager).

Effective leadership response during strategic change also involves leading not just the organisation but also individuals, to let go of past patterns, adapt, and to move forward; for which leaders require acute business awareness, and the understanding of context, process and practice (Balogun & Hailey, 1999). Jarzabkowski (2005), unpacks the leadership arsenal to show how it is that leadership actually go about doing their business - in practice. This distinction is necessary, as in this view of strategy as practice the attempt is to go beyond the overt 'dichotomies' involved in the constraints of strategy language e.g. 'content/process' (saying that in real life practice these are actually mutually intermingled, and not 'dichotomous' as conventionally thought (Jarzabkowski, 2005). Other 'dichotomies' offered as examples are:
'intended / emergent ; thinking / acting; formulation / implementation; Foresight / uncertainty' (Jarzabkowski, 2005:7) All of these require an appropriate leadership response and effective decision-making.

The need for foresight in strategic responses and its likely contribution toward effective leadership response is important (Nyabadza, 2008; Gleason *et al.*, 2011). Leaders (top managers/senior managers) appear to be involved in strategising their responses in two ways:
The first is formal administrative practices (procedural strategising involving power over resources, rewards and sanctions), and the second, via face to face interaction where the leader is able to communicate on multi-levels, both to interpret, (make sense of), or to inform decision making. The strength of Jarzabkowski's view is that the focus is on top managers as *"'...intentional actors who aim to pursue goal – directed activity'"* (Jarzabkowski, 2005: 28). Perhaps this lies at the heart of what effective leadership response alludes to: *effective decision making,* albeit the acknowledgement with regard to the input made by other middle managers. The additional senior management role is also one of direction setting and sense making about the environment and the organisation (Jarzabkowski, 1999). Despite the uncertainty of the future, this also speaks to the strident need for a specific leadership response, "*...which is about driving or seeing a future, and driving and leading towards that future.*" (Gleason *et al.*, 2011: 11).

Even on a practical level, *"Strategy abounds with management activities such as action plans, budget cycles, executive committees, which serve as important reminders and using not necessarily rational tools for the conduct of strategic activity."* (Jarzabkowski, 2005: 51). That being said, the tools used in uncertainty scenarios include e.g. trend analysis, forecasts, procedurising strategy by means of performance targets. It is thus interesting to note how these tools by default involve a space in the 'future'. It may be said thus, that a fair amount of foresight is required to manage such uncertainty; yet again, appearing to call forth an intuitively intelligent sense.

Hence the dire call appears to be for the leader's ability to negotiate decision making in the absence of all the information. Consequently the leader's ability to command the space of uncertainty appears to come forth more strongly, particularly in relation to strategic decision making.

In terms of leadership strategic decision making, problem solving is generally accepted as the precursor to the overall decision making process. Given the context of uncertainty and the impact of leaders and their strategic decisions on the organisation (Gilmour, 1973; Eisenhardt & Zbaracki,1992), a robust understanding is required of the inputs utilised in such decision making, particularly as it appears that such inputs may be intuitive in nature (Patton, 2003). Agor (1989), indicates that the leaders' intuitive input seeks to :

"'...improve the future productivity of the strategic planning and decision-making process" (Agor; 1989: 23)

As Duggan (2007), demonstrates; certain leaders are clearly capable of calling it right intuitively speaking, time and time again. What then sets these leaders apart in terms of their intuitive inputs? Is it just luck, or timing, or certain leadership ability? Is it feasible for intuition to evolve? Is it feasible that over a period of time, the experienced leader somehow, starts to develop an attuned intuitive sense? If this were so, one would certainly need to dissect the so called intuitive inputs in leadership decision making to examine for any signs of such *'Intuitive Intelligence'*. This study thus seeks to undertake such a task.

1.3.1 Assumptions of Study

Given that leaders are challenged to respond effectively in terms of strategic decision-making, under conditions of uncertainty and complexity; the following key assumptions apply in this study:

- Intuitive Intelligence develops from intuition i.e. (intuition can be developed)

- Intuitive Intelligence is linked in some way to effective decision making (specifically leadership strategic decision making).

1.4 Contribution to the body of knowledge

This research study will shed light on the gaps in knowledge referred to: (Khatri & Ng, 2000; Sonenshein, 2007; and Dane & Pratt, 2007). More specifically, this study will review the gap with regard to an understanding of the inputs into strategic decision making. The aim of the study is to assist leaders in their effective strategic decision making under conditions of uncertainty, (where there is by default incomplete information), uncertainty and risk (Burke & Miller, 1999; Miller & Ireland, 2005). This is the cue and context within which this study operates. Furthermore, this study offers the following contributions, within the following inter disciplinary and epistemological context.

1.4.1 Leadership Practice

The research focuses on one aspect of leadership practice (strategic decision making), contextualised within the economy of a developing country (Louw & Venter, 2006). Within this context, new and emerging leadership play a critical role in making strategic decisions within organisations particularly in tough economic times (Prahalad & Hamel, 1990). Findings and insights emerging from this research may impact not just on effective strategic decision-making, but ultimately on leaders' abilities to access and sustain competitive advantage. Competitive advantage in business lies in the realm of leadership skills and competencies, (Balogun, 1999; Grant, 1991; Prahalad & Hamel, 1994; Robbins & Hunsaker, 2009). As Grant (2002:91), reflects, *"'..ultimately...corporate strategy decisions are highly dependent upon a firm's ability to establish competitive advantage within specific markets and sectors.'"* Establishing competitive advantage, effective corporate strategic decisions, and the use of the leader's own decision making faculty are explored within the study context. The implications for leader judgement and decision making is a crucial area of contribution of the study.

1.4.2 Organisational and Strategic Change

The leader's capacity to successfully navigate the organisation through change and various unplanned contingencies requires:

"'...managerial and personal skills required by a successful change agent.'" (Balogun & Hailey, 1999:3).

This research aims to shed light on just how leaders make their strategic decision making processes given intuitive inputs. In terms of strategic change, there is thus the need to know the:

"' ...difference between the design of the recipe-driven formulaic approaches to change implementation and more context – specific approaches.." (Balogun & Hailey, 1999:3)

Balogun & Hailey (1999) also support the view that the capacity for effective judgement and decision making is a crucial part of the leadership toolkit, hence the examination of the inputs which leaders default to when decision making within a context of uncertainty.

1.4.3 Intuition

"The management climate of the future will place an increasing premium on ***intuitive skills*** *in the strategic-planning and* ***decision-making process."*** (Agor, 1989: 23)

It must be stated that the baseline concept of intuition is quite problematic to define, and that such definition depends on what conceptualisation stance is favoured, i.e.: "' *...paranormal power, or sixth sense, personality trait, unconscious process, set of actions, distilled experience, and residual category..."* (Behling, 1991: 47).

Residual category is described by Behling, (1991: 50) as *"...any choice that is clearly not the product of systematic, conscious data gathering and analysis..."* As mentioned before, ineffective decision making does result when intuition is used indiscriminately by leaders (Miller & Ireland, 2005). However, there is merit enough to examine the aspect of intuition which does enable the leader to display extraordinary effectiveness in decision making (Dreyfus, 1986; Duggan, 2007). It is this aspect which appears to behave remarkably close to an *intelligence*. Taking into account literature on strategy which has "*...for the most part ignored the role of intuition and emotion in strategy making and implementation...*", (Pettigrew *et al.*, 2002: 199), it is perhaps this 'Intuitive Intelligence' application that is so vital to understanding how leaders make the right call in times of uncertainty and turbulence.

1.4.4 Intuition - an evolving intelligence

That seasoned business leaders default to a sense that is intuitive as well as inherently intelligent may not be as far-fetched as it may appear. As Sagan (1977) describes below:

"Thus the recent rapid evolution of human intelligence is not only the cause of but also the only conceivable solution to the many serious problems that beset us. A better understanding of the nature and evolution of human intelligence just possibly might help us to deal intelligently with our unknown and perilous future" (Sagan, 1977: 4)

The understanding of an evolutionary Intuitive Intelligence geared to help prepare leaders for the future, may provide an account of why it is that certain leaders have a knack for effective decision making, and an uncanny ability to 'call it right' even in the absence of all the complete information. While it is known that business leaders throughout the ages have used intuition in strategic decision making, (Agor,1989; Burke & Miller, 1999; Eisenhardt, 1989; Khatri and Ng, 2000; Mintzberg, 2001) an *ineffective* outcome can still result (Eisenhardt & Zbaracki, 1992). To seek for what it is that behaves like an intelligence in an effective intuitive decision is almost akin to searching for the proverbial Holy Grail. Nonetheless, given the propensity for effectiveness, and the faculty it allows for leaders to 'call it right', this certainly bears investigation.

One is given a clue along the way in an article on intuition, and a fleeting reference to ***'Intuitive Intelligence'***, as a closing note in the study (Sadler - Smith and Shefy, 2004: 89). Given no further clues, the departure point for the current study was formed, as was the search for scientific evidence, however considerable the challenge posed. Since very little is known about this so-called Intuitive Intelligence in strategic decision making, the question of ***what*** Intuitive Intelligence actually is; and if indeed leaders do use some sort of Intuitive Intelligence to aid their decision making, ***how*** do they go about doing so. Thus the gap in knowledge - one this study seeks to address.

This leads to the **thesis put forth in this research study – i.e :**
Intuitive Intelligence may be linked to effective leadership strategic decision making.

While it can be argued that leaders are able to make the ***right call*** when making strategic decisions in situations which involve risk, uncertainty, and with incomplete information, what is still unknown is ***how*** they are able to do this. How are they able to draw upon this 'Intuitive Intelligence' to make the right call?

1.4.5 Significance of the Study

This study thus explores the construct of Intuitive Intelligence. What it is; what role it may play as a potential effective decision making faculty; how Intuitive Intelligence is used by leaders in strategic decision making. A means of distinguishing the construct from intuition and its pitfalls (Ireland & Miller, 2005) will also be revealed through this study.

"Human beings and other animals have a very sophisticated high –data – rate perceptual and cognitive abilities that simply bypass the verbal and analytic consciousness that so many of us regard as all of us there is. This other kind of knowing, our non-verbal perceptions and cognitions, is often described as intuitive." (Sagan, 1977: 157)

Sagan (1977), points to the impact of experience and the learned environment on the ongoing development of the intuitive faculty. This indicates the trace of an evolutionary past, and speculatively, a developmental faculty, which he describes:

"But intuitive knowledge has an extremely long evolutionary history; if we consider the information contained in the genetic material, it goes back to the origin of life." (Sagan, 1977: 158)

Sagan (1977), goes on to indicate an anatomically identifiable intuitive location in the brain, and the purpose of this intuitive function as the survival of man.

"The survival value of such an ability, particularly for our ancestors is quite clear." (Sagan, 1977: 157)

Consequently, it stands to reason that such a faculty whose purpose, it appears, relates to the survival of the species, be endowed with some form of intelligence. Given this consideration, this study will therefore make reference to this form of intelligence as 'Intuitive Intelligence', (abbreviated as II).

Since the pragmatic intent and application of the study is aimed at understanding the nature of Intuitive Intelligence within the context of leadership strategic decision making; the framework of the research question and sub questions thus becomes:

1.5 Research Question

"Can Intuitive Intelligence be defined, and if so, what role does it play in leadership strategic decision making?"

Research Sub questions:

In order to unpack the Intuitive Intelligence construct, the research sub questions were posed as follows:

- Can Intuitive Intelligence be defined? [Based on desk top study, deconstruction of intuition, analysis and findings].
- Can Intuitive Intelligence be empirically verified? [Based on empirical data].
- Can the components of Intuitive Intelligence be identified? [What are its parts and properties. What is it made of?]
- Can the process of *how* leaders use their Intuitive Intelligence during strategic decision making be described?
- Is there a current level of use of Intuitive Intelligence in business leaders?
- Are there characteristics of the 'ideal intuitively intelligent' leader [descriptions of the prototype exemplar].
- What is the role (if any) of Intuitive Intelligence in leadership strategic decision making.

In this study, the research sub questions were aligned to the instrument questions. For purposes of the final report the research sub questions were aligned to the overall research objectives, as follows:

1.6 Research Objectives

To define Intuitive Intelligence and its role in leadership strategic decision making. This involves a breakdown of the above objective, to:

1. Define Intuitive Intelligence (theoretical basis).

2. Derive an *empirically based* definition of Intuitive Intelligence.

3. Identify the components of Intuitive Intelligence.

4. Describe *how* leaders go about using their Intuitive Intelligence during decision making.

5. Determine if there is a current level of use of Intuitive Intelligence in business leaders.

6. Determine if there are characteristics of the 'ideal intuitively intelligent' leader [descriptors of the prototype exemplar].

7. Identify the role (if any), of Intuitive Intelligence in leadership strategic decision making

1.7 Summary

In summary, the themes covered in Chapter One were Strategy, Strategic Change, Leadership, Leadership decision making, Intuition and Intelligence. The comprehensive research question formed therefrom was: What is Intuitive Intelligence, and what role if any, does it play in leadership strategic decision making? Sub questions were framed as follows: What is Intuitive Intelligence?; What are the components which comprise Intuitive

Intelligence?; How do leaders use this 'Intuitive Intelligence' to make the right call?; Is there a current level of use of Intuitive Intelligence in business leaders?; Are there characteristics displayed by the 'ideal intuitively intelligent' leader? Given the myriad of challenges faced by leaders in times of uncertainty, complexity, and risk; leaders are duty bound with the strategic responsibility to steer the organisation to safety, and sustainability. To examine this further, the theoretical foundations follow in Chapter Two.

CHAPTER TWO

THEORETICAL FOUNDATIONS

"Did they know why they knew? Not at all. But they knew."

*(*Gladwell, 2005: 11)

2.1 Introduction

The ability of leadership to respond effectively is pertinent; particularly in the area of strategic decision making where the right call must be made often in the presence of uncertainty and in the absence of required information (Crossan & Sorrenti, 1997; Brousseau, Driver, Hourihan, & Larsson, 2006). Therefore the need for intuitively intelligent decision making is investigated within the context of complexity and uncertainty. The opening quote by Gladwell in 2005, alludes to the accuracy of *"'...another kind of decision making apparatus that's capable of making very quick judgments with very little information.'"* Such an ability involves doing *"'...an excellent job of sizing up the world, warning people of danger, setting goals, and initiating action in a sophisticated and efficient manner.'"* (Gladwell, 2005:12). It stands to reason that such effectiveness in terms of ability would be required in a business environment which has, if anything, exponentially increased in complexity and uncertainty (Vest, 2005). The prevailing conceptual frameworks are examined, taking where applicable, South Africa as an example, although in most cases, the lessons have a generic world wide appeal. The journey thus unpacks theories in:

- **Complexity Theory**
- **Chaos Theory**
- **Risk Management**
- **Strategy**
- **Strategic Decision making**
- **Leadership and Agency**
- **Intelligence**
- **Intuition**

The epistemological framework in Figure 2.1 shows the inter-relatedness of the various theories and knowledge fields discussed in this study.

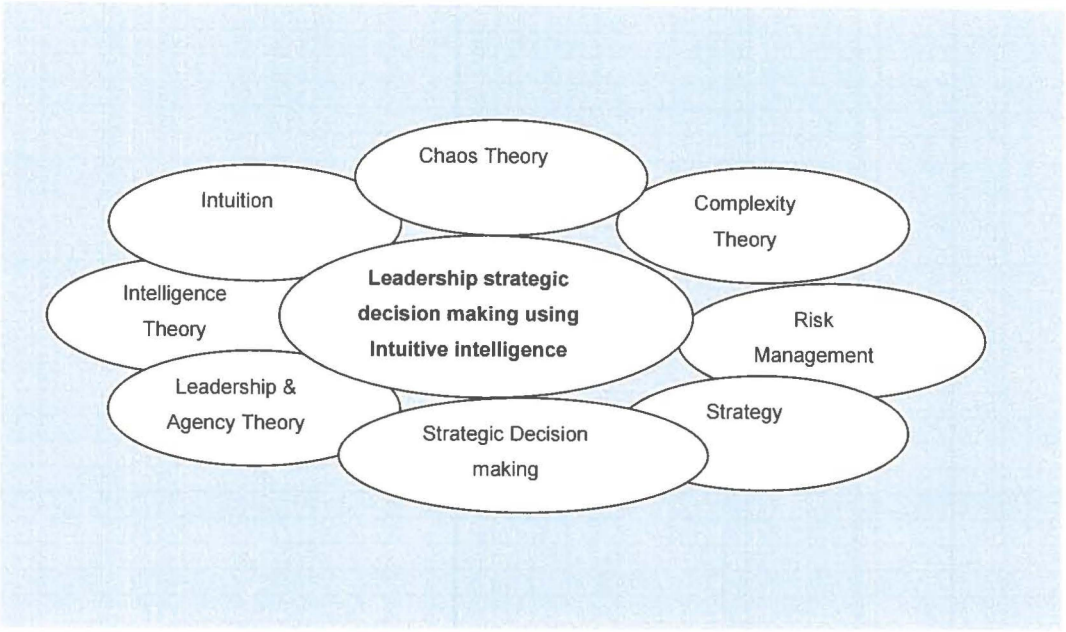

Fig: 2.1 Epistemological frameworks pertinent to the study.

Given the opening quote reference to uncertainty and complexity facing leaders, there are either positive or negative consequences for the organisation, in terms of leadership response (Mintzberg, 2001). To unpack this concept further, extant theory and relevant knowledge fields, are explored. The first theory frames strategy within the context of complexity.

2.2 Complexity and Chaos Theory

Figure 2.2 illustrates the areas of business complexity where effective leadership response results in an organisation which successfully adapts to its environment instead of sliding into demise. Mason (2006) in his detailed review of Chaos Theory, proposes that companies moving successfully from order to chaos are able to do so by using an entrepreneurial, innovative perspective.

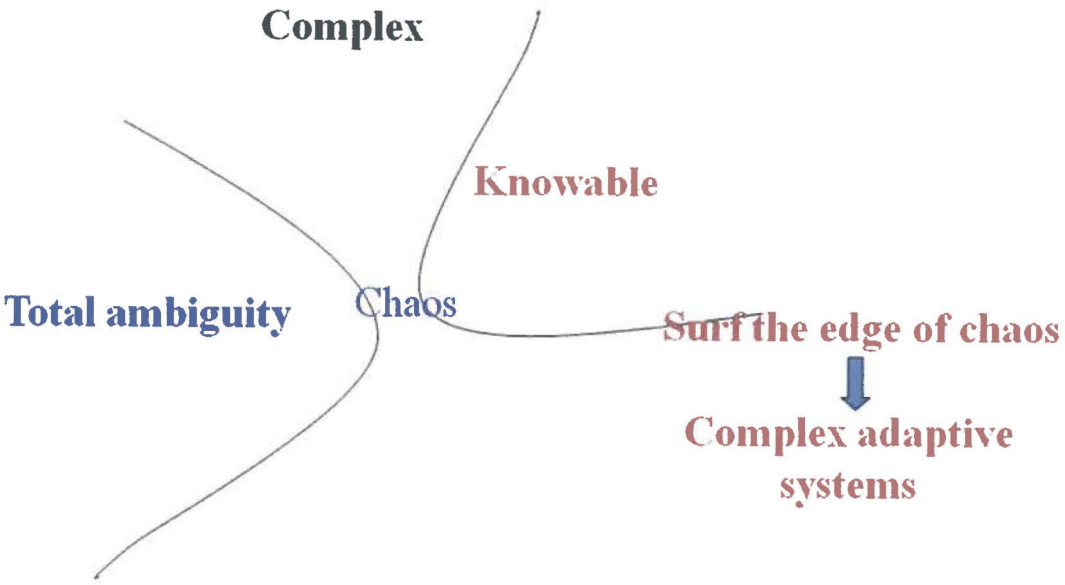

Fig 2.2 Chaos and Complexity Diagram

Adapted from Jones (2004:496)

Figure 2.2 shows the move by organisations to become complex adaptive systems by learning to adapt to their environment; being alert to new trends and opportunities in the future, consciously choosing to remain unfettered by the albeit reassuring patterns of the past. As stated by Pascale (1999): *"One consequence of emerging complexity is that you cannot see the end from the beginning. While many can readily acknowledge nature's propensity to self-organise and generate more complex levels, it is less comforting to put oneself at the mercy of this process with the foreknowledge that we cannot predict the shape the future will take. Emerging complexity creates not one future but many."* (Pascale, 1999: 90).

2.2.1 Core tenets

Given that leaders grapple with problems of 'uncertainty, complexity, chaos and non linearity', (Tetenbaum, 1998; Anderson, 1999; Haidt, 2001; Pettigrew *et al.* 2002; Spender, 2005; Goodwin, 2009; Tosi, 2009; Casey & Goldman, 2010), Chaos theory and the application thereof to business offers a way to understand the dynamics of how organisations (and their

leaders) grapple with the issues and growing pains of becoming complex adaptive systems.

2.2.2. Critique

The approach in the study is to refer to authoritative literary works in terms of reference as the concepts per se are explicated in the works themselves. The critique is thus undertaken from a researcher assimilative and reflective standpoint. Views of change as purposeful and planned (Mintzberg, 1993), are juxtaposed with the view of change as *"...nested sequences of events that unfold over time in the development of individuals, organisations and industries."* (Garud & Van De Ven, 2001:n.d.). Change is thus related to complexity and non-linearity, where *"...non-linearity implies that the response is not directly proportionate to the response stimuli."* (Garud & Van de Ven, 2002: 218). Strategy is hence non-linear in respect of an 'x' input generating a 'y' output. Chaos theory views disorder as the natural order of an organisation, with a disturbance to the living system resulting in adaptation and learning (Jones, 2004).

2.2.3. Research study stance

The position thus adopted in the study is that the leader has to charter the organisation through a course of ever changing and complex business reality. Non-causality and decreased strategic levels of rationality thus need to be effectively navigated by the leader within the context of complexity. Complexity theory also links to Chaos theory as a way in which organisations and its leaders are able to deal with uncertainty and ambiguity.

2.2.4 Theory relevance for study

Miller (2004) cautions against a rigid programmed and formulaic approach in leading a successful organisation, where organisational demise results if approaches are still utilised when no longer appropriate. In the case of the South African example, the rigidity of pre-1994 authoritarian leadership certainly did decline - making way for a more democratically sensitive style of leadership. This was mirrored by the South African business domain,

with many businesses challenged by old school leadership and facing an adapt or die scenario. These challenges and the leadership responses were illustrated in Chapter 1.

A global example where leaders got it right, is described by Jones (2004) in relation to research done by Pye (1995) where senior executives from a diverse range of industries (from textile manufacturing to banking), were faced with uncertainty and complexity. They showed not a rigid adherence to explicit strategy, but rather an implicit ability as leaders to be successful in their '"*... readings of situations, their groundings in the language and traditions of the organisations...*,"' (Jones, 2004: 502). This explicates the position whereby leadership is prompted to adopt an inherently contingent and intelligent approach by being situationally responsive to the cues at hand. Stahl & Grigsby's (1991) example of IBM slipping from the Fortune Top companies list (1983-1986), then completely out of the top ten in 1988, provoked questions as to why this happened. Their response was indicative of the need for timely strategic response amidst the shifting sands of organisational challenges.

*"IBM found itself in a changed environment and was slow to respond." (*Stahl & Grigsby, 1991:27*).* In 1986, when IBM's market valuation of $100 billion shrank by $24 billion in spite of the size and power of IBM, it was nonetheless compelled to respond to the challenges of a changed environment. This goes against the grain of those of the laager mentality or school of leadership which supports rigid encamped leadership responses - inherently prescriptive and authoritarian in nature. However, the classical schools of strategy such as the Design and Planning school served to guide leadership in its time (Mintzberg, 1990). For example, the SWOT tool for planning is still currently utilised, and as such, the classical approach clearly served the times. And these are times of unprecedented complexity and uncertainty, (Jones, 2004) which by implication require new leadership approaches.

The argument is that whenever a leap along the leadership evolutionary ladder is made in terms of leadership response, it *is so as to achieve what has never been achieved before. And, as such, leaders must do what has never been done before*. It is to this adaptive intelligent leadership response that this study speaks. Whether these effective responses stem initially from humble intuitive beginnings, remains a matter for further investigation.

Jones' (2004), compelling argument for the unfolding of such evolutionary leadership 'leaps' is illustrated in Figure 2.3. His assessment in terms of the timeline of strategic schools of thought, shows the drive toward new leadership approaches born out of their times. The 'signs of the times' as it were, are indicative of the type of leadership response when faced with decreased levels of rationality, increasing complexity and uncertainty. Decreased rationality in this context refers to contexts where linear logic was ineffectual in meeting the demands of new complex, uncertain environments. Responding effectively meant new responses, as strategy became less and less linear along the line of time.

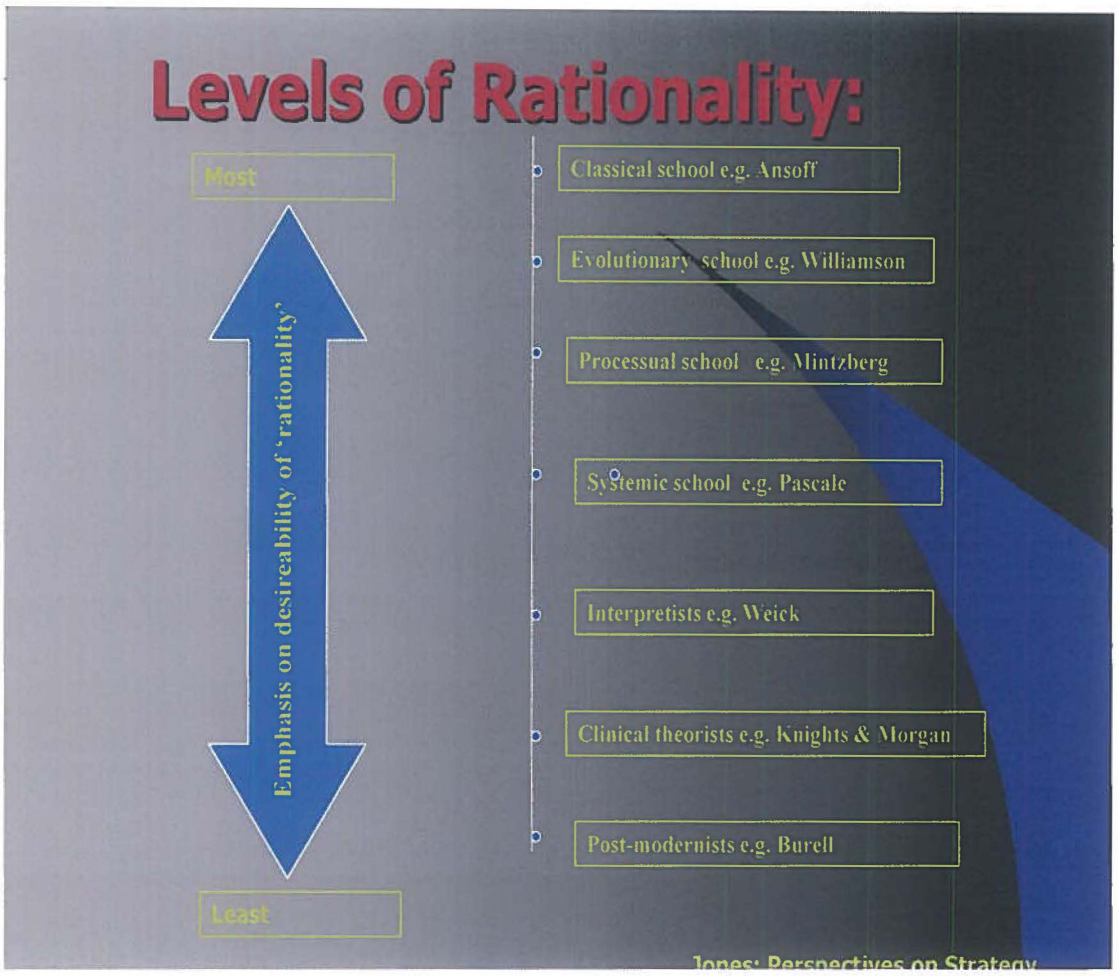

Fig 2.3: Levels of Linearity of strategy

Jones (2004: 505)

Taking the above levels of 'rationality' (non linearity) if one were to extend the timelines to current and beyond, the scenario might look somewhat similar to that depicted in Fig 2.4.

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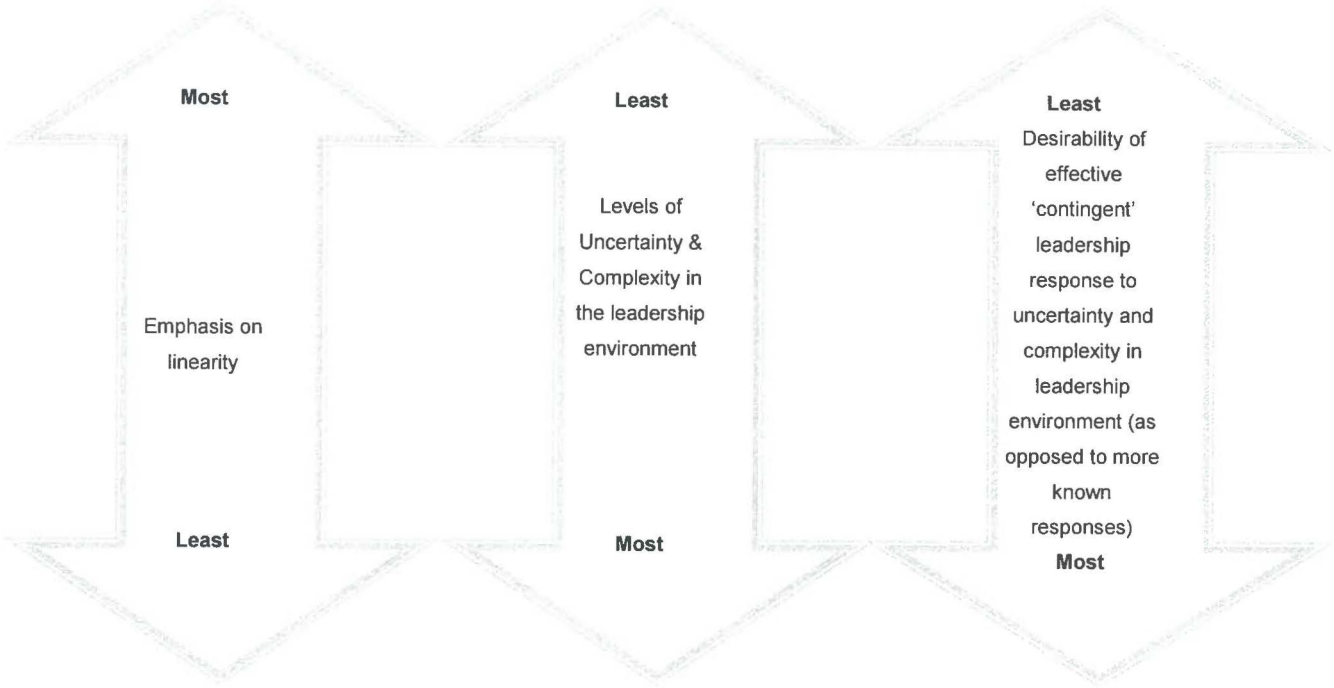

Fig 2.4: Inverse relationship between 'levels of linearity (rationality) and levels of uncertainty and complexity in leadership environment'.

Adapted from Jones (2004: 505).

Figure 2.4 illustrates the paradox that as levels of complexity and uncertainty increase in the business environment, the less reliance to be placed on linear input–output outcomes, and hence the more the need for contingent leadership to pull the organisation out of a downward plunge. Moreover, when one juxtaposes the evolution of strategic thought with the contextual need for less 'rationality based' intuitive strategic decision making, one can see the unfolding of depths in strategic thinking that might require slightly more sophisticated decision making abilities than originally conceived of i.e. decisions which are critical to get right, under extremely difficult circumstances.

In terms of strategic thinking, of paramount importance to the decisions taken are the outcomes or the goals of strategy. Often cited among these are the goals related to organisational growth, profitability, and risk reduction (Bowman, Singh & Thomas, 2002).

2.3 Risk Reduction

2.3.1 Core tenets

Risk reduction poses a leadership challenge, in that the reduction thereof, hinges the following:

- Macro-economic risk – outside the organisation's control, such as wars, natural disasters, wage rates, interest rates, commodity prices, and related systemic risks.
- Political risks – governmental posed risks and threats, nationalisation, affecting exchange rates of a local currency.
- Competitive risks - uncertainties in competitor response to organisation's strategies. Technological risk poses a related threat, and part of a competitor response may be to adopt advanced technology.
- Resource risks – where the organisation is unable to acquire, spare, or leverage resources, key people skills and talent, being one of them (Barney, 2001).

All the above considerations of risk involve changes over time, hence a dynamic management and reduction thereof. Other components of business or financial risk are (Pettigrew, *et. al.*, 2002: 87):

- operating risk,
- ethic - legal risk,
- reputational risk
- corporate governance or lack thereof.

Within the premise of risk management theory these types of risks need to be identified, and managed. Mergers and diversifications are measures taken to reduce risk, albeit more common in managerial run firms than in owner controlled firms. Risk reduction principles are guided by two criteria:

- Firstly, the cost of capital needs to be outweighed by the return on capital in the long term.
- Secondly, profitability must outweigh pursuit of other objectives, or managers run the risk of losing their jobs. This may happen either through an acquisition or a toss out by shareholders. For example, oil companies such as Exxon Mobil and Shell show that diversifying upstream, (exploration and production), and downstream (marketing and refining), enable returns in order to stabilise cash flows. The objective being for most senior executives to secure major investment projects.

2.3.2. Critique

Mergers and acquisitions are not always accepted as risk reduction measures and it appears likely that that the move toward mergers and acquisitions have more to do with Agency theory rather than actual risk reduction consideration (Pettigrew, *et al.*, 2002). Also, if a manager's remuneration is linked to company size rather than profitability, then growth will be pursued as a strategic objective, and more than likely at the expense of profitability (Pettigrew, *et al.*, 2002).

2.3.3. What is the research study stance?

In the context of the research study, risk is a challenge to the senior executive and a variable which impacts heavily on resultant strategic decisions, particularly those decision premises from a value or a factual base (Simons, 1987). Top management speak directly to this aspect, when they shape organisational purpose, (Mintzberg, 2004), and establish the discretion afforded to its members. They also specify the risks which the organisation is averse to, or for which it may have an appetite.

2.4 Strategy

2.4.1 Core Tenets of Strategy

Strategy is concerned with enabling the organisation to achieve its strategic plan and objectives, be it short, medium, or long term (Mintzberg, 1987). A strategic plan may be conceived as a cohesive series of strategic decisions

(Mintzberg & Waters, 1990). While strategic decisions are unpacked at length in the section hereafter, it must be noted that such decisions are made in accordance with the types of strategy dealt with.

Strategies may be divided into three types or levels as follows, (Stahl & Grigsby 1991: 48)

- Corporate
- Business
- Functional

Corporate Strategy

Examples of corporate level strategies involve decisions around concentration of product, diversification of organisation, (horizontal), mergers and acquisitions, joint ventures and restructuring, (Hitt, Costa & Nixon, 1998; Hitt, Clifford, Nixon & Coyne, 1999). Corporate level strategies and related strategic decisions (Hamilton, 1981), are those relevant to and within the remit of this study. Other types of strategic levels are:

Business Strategy

Business level strategies concern decisions around cost leadership, integration along value chain, differentiation and focus. Business strategy and functional strategy (to follow) is outside the remit of this study.

Functional Strategy

Included are those at an operational level specific to sales, marketing, operations, finance, R&D, and IT. Each of these departments may develop an interdepartmental strategy which flows in the overall corporate strategy.
The fit and flow between the external challenges from the environment; and the internal challenges from within the organisation and how senior management face up to these in making effective strategic decisions is depicted in Figure 2.5.

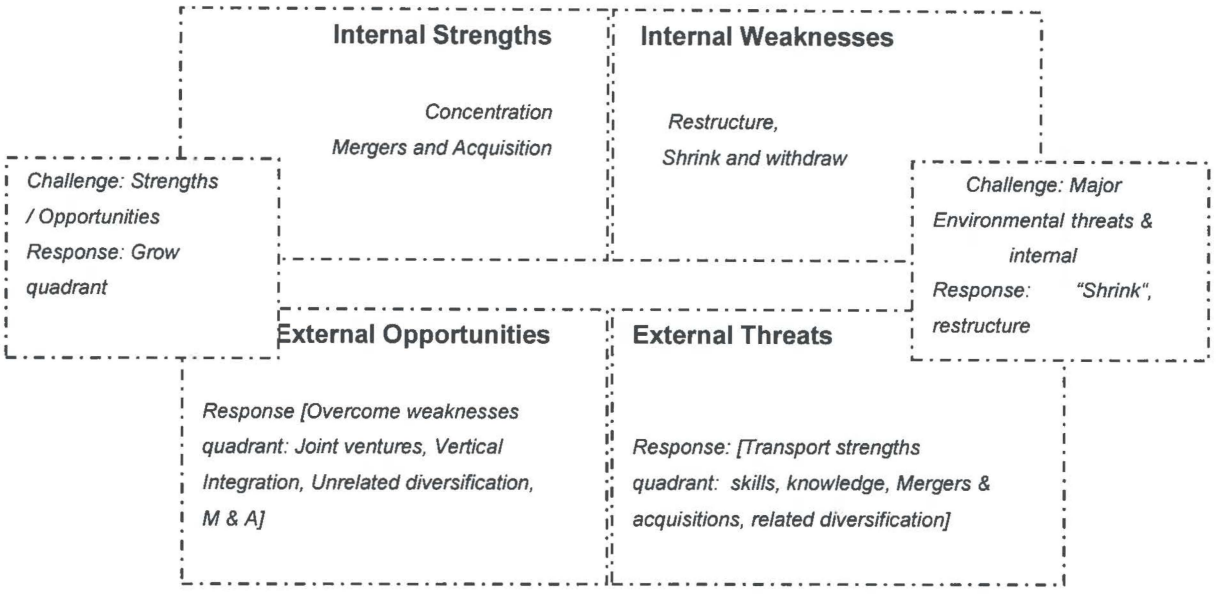

Fig 2.5: Internal and external Macro challenges and leaders' strategic response

Adapted from Stahl & Grigsby (1991:47)

The terms used in Figure 2.5 are unpacked as follows:

- **Backward Vertical Integration** - refers to a firm's business decision to move closer to the raw materials stage of production along the value chain.
- **Forward integration** - refers to the firm's business efforts to integrate closer to the finished products/ services stage.(Stahl & Grigsby, 1991: 61-62)
- **Merger** - a mutually agreed upon joining together of two organisations
- **Acquisition** - a hostile takeover of an organisation usually without the sanction of the key strategic decision maker. (Stahl & Grigsby, 1991: 65)

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From a conceptual meta – framework point of view, ten schools of strategic thinking can be identified from Mintzberg *et al.,* (1990); Pettigrew, *et al.,* (2002: 423). These are:

- Design school – where strategy formulation results from a process of conception.
- Planning school – strategy as formal process of analysis.

- Positioning school – strategy concerned with positioning the organisation within the industry.
- *Entrepreneurial school – strategy as a process of envisioning possibilities and taking advantage of new opportunities.*
- *Cognitive school – strategy as a mental process.*
- *Learning school – strategy as a process of social learning.*
- *Power school – strategy as a process of negotiation.*
- Cultural school – strategy as a process of building a collective unique identity.
- Environmental school – strategy as a primarily reactive rather than anticipatory process.
- Configuration school – strategy as a process of quantum – like transformation.

2.4.2. Critique

Design, Planning and Positioning schools relate to strategy (Mintzberg, *et al.,* 1990) in a prescriptive sense where strategy should be formulated (planning, entrepreneurial and design school). The remaining schools explain how the process of strategy comes into being (i.e. learning, power and cultural school). The schools in italics above bear relevance to this study in that strategy is a mental process in the mind of the leader, and is learnt and enacted within the organisational context (Johnston, 2003; Floyd, Roos, Jacobs & Kellermans, 2005). While the above schools relate to strategy as "*...consistent corporate action over time...*" (Haridimos & Knudsen, 2001: n.d.) it also appears to be widely acknowledged that the primary purpose of corporate strategy is the "*'...creation of sustainable competitive advantage...*" (Haridimos & Knudsen, 2001: n.d.). This points to the orientation of senior management toward corporate strategy and decision making, whereby they display strategic advantageous behaviour in their actions and decisions (Lamb & Shrivastava, 1988; Moorhead & Griffin, 2001). However, the view held by Mintzberg & Waters (1990), holds that if strategies change, they do so with little notice, and that when they do, the process can be complex, and somewhat emergent. All this is left to the

leader to deal with, as they shape, over time, *"...strategy as a stream of goal directed activity..."* (Jarzabkowski, 2005: 173)

2.4.3 Study Stance

The stance of the study is that there are elements which overlap with each other. Such unfolding and sharing would take place in various shades, particularly within the complex, messy enactivist context of the real world. Mintzberg (1987) proposed a view of strategy which allowed for an uncertain future to be factored in; calling the resultant strategy - emergent. This process is unfolded in Fig 2.6.

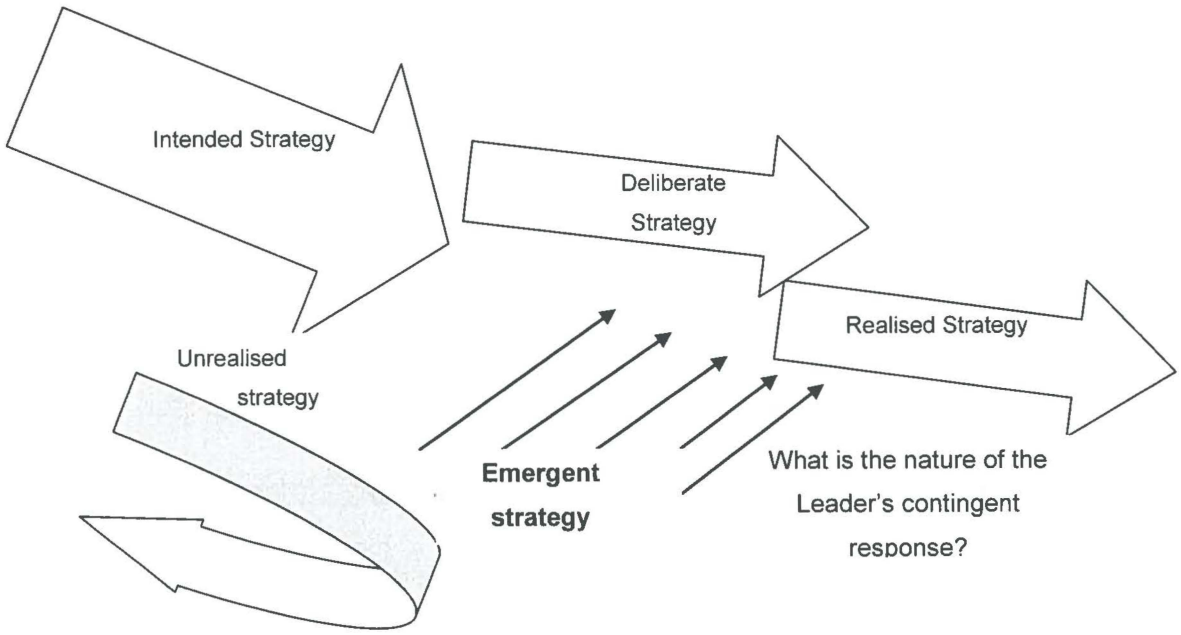


Fig 2.6: Emerging in response to the challenges posed by an uncertain future: Emergent strategy.

Adapted from Stahl & Grigsby (1991: 162); Mintzberg (1987)

To reinforce the emergent nature of strategy as shown in Figure 2.6, it must be noted that generic explanations of strategy do not account for the organisational context, timing, personalities, and contextual situations of strategy making (Pettigrew, *et al.*, 2002).

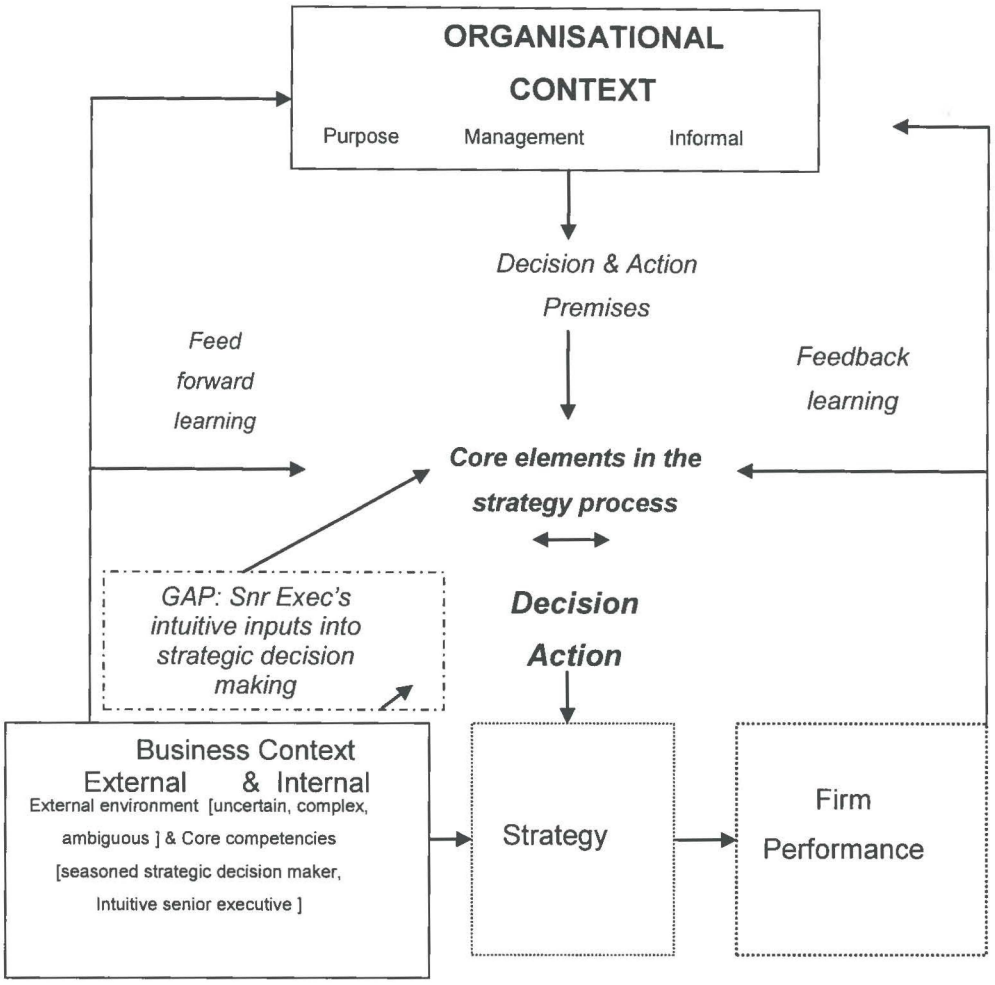


Fig 2.7: The organisational context and the gap which forms the study focus: decision making in the strategy process

Adapted from Pettigrew et. al., (2002:195)

Figure 2.7 depicts the context of strategy within the dynamic of decision making, actions, consequences and the organisation's performance. The dotted area locates the gap where the study seeks to make a contribution in relation to the body of knowledge.

The organisational context above is used to denote the strategic and structural context, purpose of the organisation, and its formal and informal management systems (Barnard, 1938; Simon, 1987; Baum, 1998; Porter, 2004). Strategy, then is seen as a stream of actions and decisions which are continuously revised by feedback and feed forward learning (Quinn, 1990; Mintzberg, 1993; Goold, 1996(a); 1996(b); Senge, 1996)

"'Senior executives in a firm are not only the decision-makers and actors in the strategy process, they are also the architects and managers of the organisational context that shapes these decisions and actions.'"

(Chakravarthy & White, 2001: n.d.).

This view has support in the practitioner school of thought, where strategy "*...is concerned with going inside the lived experience of strategy as a practice, understanding from the eyes of those engaged in it.*" (Jarzabkowski, 2005:180) This helps shed light on why much of the difference may take place at the individual cognitive level, and why this may make the difference when we try to understand the question of 'why them and not us', in relation to successful organisations. This then leads on to strategic decision-making.

2.5 Strategic Decision making theory

2.5.1 Core tenets

What then is strategic decision making?

Decision-making within a theoretical framework stems from Image theory (Beach, 1996), a unifying theory for individuals' decisions, choices, options and trade - offs within the organisation (Mintzberg & Westley, 2001).

According to Stahl & Grigsby (1991), successful strategic decision making is to "'*...navigate the organisation in such a fashion that the opportunities are realised and the threats are avoided.'*" (Stahl & Grigsby, 1991: 48)

The situation however, appears to be much more complex than that. Socio-politico processes and contextual factors point to the conflicts which a personal agenda can have in an organisation (Lynch, 2006). However, it is pertinent to note when referring to decision makers of organisational strategy:

'"...their perceptiveness in seeing connections, their sense of unease; their boldness in undertaking action in the face of uncertainty about the consequences of their action.'" (Haridimos & Knudsen, 2001: n.d.).

But what are these strategic decisions taken by decision makers?
Stahl & Grigsby (1991) offer the following three characteristics which distinguish strategic decisions from other business decisions: "

1. *Strategic decisions deal with concerns that are central to the livelihood and survival of the entire organisation and usually involve a large portion of the organisation's resources.*
2. *Strategic decisions represent new activities or areas of concern and typically address issues that are unusual for the organisation rather than lend themselves to routine decision making.*
3. *Strategic decisions have repercussions for the way other, lower-level decisions in the organisation are made."* (Stahl & Grigsby, 1991: 4)

Strategic decision making may take place along the following three levels: Corporate, Business, and Functional.

For purposes of this study, the unit of analysis is the strategic decision taken at corporate level, rather than at business or functional level. This is done because:
"A hierarchy of strategic decisions exists in the strategy formulation process in which corporate – level strategic decisions influence business – level strategic decisions that influence functional - level strategic decisions."
(Stahl & Grigsby, 1991: 26).

Thus the key to understanding strategic level decision making lies in understanding the corporate level decisions taken. Hence, this is the justification in the research study for collecting evidence from senior executives. Examples of outcomes of corporate level strategic decisions involve decisions around mergers and acquisitions, joint ventures, and restructuring (Mahoney & Rajendran, 1992)

Strategic decision makers appear to be categorised according to the *"'...outsiders on the board of directors and the inside executives employed by the organisation.'"* (Stahl & Grigsby 1991: 21); and examples of these

insiders are the CEO, (or his designate), the president, and/or the chairman of the board.

In terms of the scope of the study, only 'inside' corporate level strategic decision makers are examined, such as the CEO, (or his designate), or senior executives involved in corporate planning. Stahl & Grigsby (1991) also allude to the challenges which constantly beset the strategic environment in spite of the best laid plans; a point supported by Gibbons (1999). But why are external threats and opportunities so important?

External threats and opportunities are important because they are largely "*...not under the direct control of the corporate decision makers...*" (Stahl & Grigsby, 1991: 30). Thus it stands to reason that any ability that enables the corporate decision maker to maximise opportunities and minimise threats is to be nurtured by the organisation.

Part of the problem is that strategic decision making biases affect the abilities of decision makers *to "...ensure consistent implementation of strategic decisions and higher organisational performance..." (*Stahl & Grigsby, 1991: 21). In other words, in terms of the corporate decision maker, it can be seen *"...how the decision-making biases of the CEO..."* (including senior executives in terms of this study) *"...can impact the quality of the strategic decision..."* (Stahl & Grigsby, 1991: 18)

Thus limitations impacting on leaders' strategic decision making abilities are: filters, biases, and information processing limitations, bounded rationality, (Simon, 1987), that colours leaders' reading of the environment which influences their strategic choices, and ultimately governs their strategic decision. Hambrick & Mason, (1984), in the article 'Upper echelons: the organisation as a reflection of its top management' explain why the same situation can evoke different strategic decisions *(both effective and ineffective*), by different decision makers (Figure 2.8). Simon's (1975), bounded rationality view enjoys wide acceptance of rational choice decision making models. However key to this is the premise of the decision

makers' limited information processing capacity. Underpinning strategic decision making models is the rational perspective of *'consistent value maximising choices within specified constraints'*. (Whittington *et al.*, 2002:211). Part of these constraints lie inherent within the strategic decision maker (Fig 2.8).

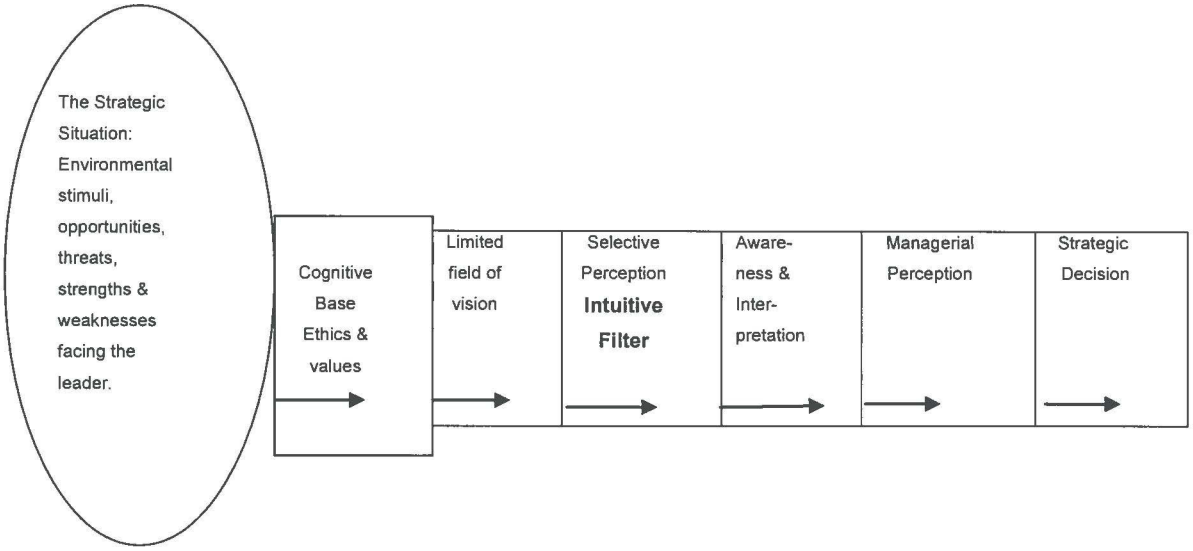


Figure 2.8: Decision making biases affecting outcomes of strategic decisions.

Adapted from Hambrick & Mason, (1984:195)

Fig 2.8 illustrates the external and internal environment of strategic decision makers. Before a series of strategic decisions can be taken therefore, and before a strategy pattern emerges, the taint of various filters upon that strategic decision act so as to affect successful or effective outcomes of a strategic decision. There are biases, consensus, and lack of insight. (Freud, 1959; Butler, 1990; Stahl & Grigsby, 1991).

Types of Biases include:

- Simplification – where decisions on complex problems are made on the basis of a few simple elements.
- Hindsight – decisions are made on the basis of inaccurate comparisons to decisions made in the past.
- Aggregation - where information perceived as similar is inaccurately grouped into classes or types.

- Consensus - important as there are a number of strategic decision makers in an organisation. A number of factors affecting consensus have been identified, such as:

    - Diversity of background among corporate boards of directors,
    - Motivations (reference to Agency theory)
    - Roles among the different decision makers
    - Differing experiences among executives

- Lack of insight - in terms of how executives make their decisions also impacts on strategic decision-making. As Stahl & Grigsby, (1991) put it: *"How can the executives communicate with one another if they cannot correctly articulate the important factors in their decision processes?"* (Stahl & Grigsby, 1991: 16)

This "'*...lack of documented insight into executives' own decision making...*'", (Stahl & Grigsby, 1991:16); supported by Gilmour (1973), highlights the strategic decision as the secondary unit of analysis in this study, with the primary focus being the senior executive strategist him/herself. But what is meant by leadership strategic decision making? How does it start and what are the inputs therein?

Bower (1970), offers an example of a strategic decision e.g. involving resource allocation in three phases: definition, impetus, and approval.

- Definition

Input to the decision involved identification of a discrepancy – for example, a problem in terms of a gap in resource allocation due to capacity shortage on the line, or a product shortage, or a product but no market. Next, a decision search ensued with the search for the decision being either problem driven or solution driven. A bottom up process followed, where functional managers tried to convince their business or divisional managers of the 'solution'. In seeking a proper definition to the problem, divisional managers tried to show that the requested investment was aligned to the

priorities of top management. Sometimes the numbers were worked such that the decision justified the investment. *"The divisional manager's decision was at times intuitive and not based on prior formal analyses. However, a formal analysis was always done later to support the decision that was made."* Chakravarthy & White, (2001: n.d.).

- Impetus

The business or divisional manager then packaged and sold the proposal to senior management, notwithstanding the intuitive inputs of the impetus process.

- Approval

If the investment was properly packaged in terms of top management priorities, approval was obtained. In terms of the process, it appears that strategic decisions and actions actually do not follow a linear sequence, but that sometimes the impetus and approval phases may actually precede the definition phase. Also, the decision dynamic need not flow in the bottom up direction as suggested above. Sometimes senior executives, not functional managers "'*...may be the instigator of this decision.*'" (Whittington, *et al.*, 2002: 194). In this respect, decisions and the process for reaching them may not always be a deliberate one, nor may it be consensual, or even clearly articulated. To this mix, learning is also said to be an important additive to decision making and action taking. This decision making dynamic clearly poses a leadership challenge (see Figure 2.9)

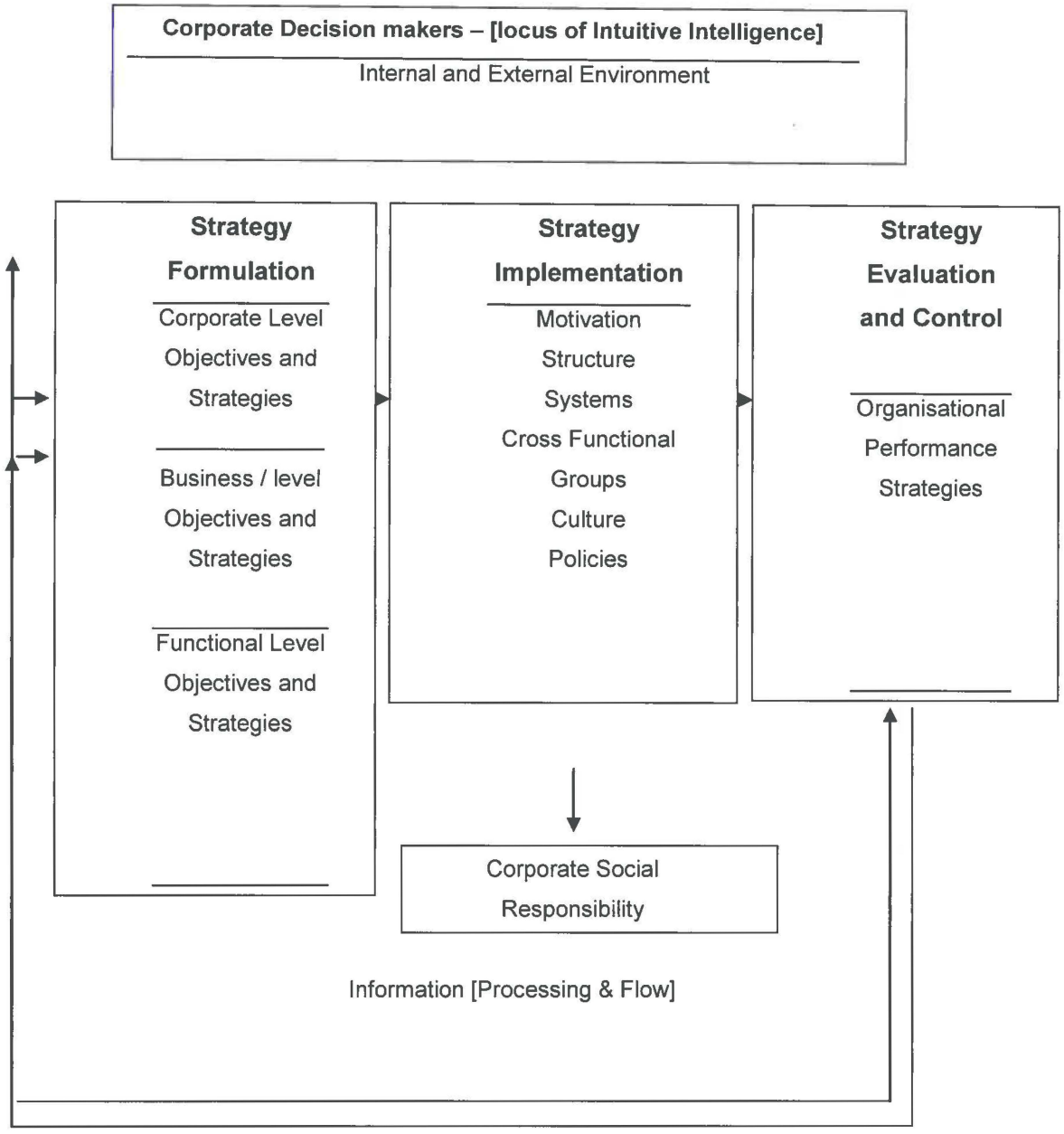


Fig 2.9: Depiction of strategy process, influenced by the decision maker.

Adapted from Stahl & Grigsby (1991:7)

In terms of the model in Figure 2.9, the strategy process, more especially strategic decision making, occurs within the overall organisational context of culture, structure, systems and policies (Segal–Horn, 2004). The organisational strategy is then the discernable pattern which is revealed over time from the decisions and actions taken within the organisation.

But clearly intentions to carry out strategic actions are themselves subtle decisions in their own right. Just as a decision not to take strategic action is in itself a decision. The point being, if strategy is shaped from a stream of decisions and actions (Mintzberg, 1987; Whittington, 1993), and if the decisions that shape the actions arise at times from a source which is intuitive in nature, (Mintzberg, 2001; Drucker, 2006) then to properly understand how strategic decisions are formed, means that one has to understand the intuitive inputs which gave rise to the strategic decision in the first place. It stands to reason that intuition occurs within senior executives, and so the relevance in terms of the study is that decisions made by senior executives arising from intuitive inputs may hence be understood, first *within* individuals, and then without; in terms of the broader strategic and organisational framework.

2.5.2 Critique

Whilst the classical school of strategy has proffered an understanding of the macro environment impacting on strategy, and even perhaps the organisational structure, systems and culture, (Cyert & Hedrick, 1972) it does appear that there is room for Jarzabkowski's (2005), 'Strategy in Practice'. Research, it appears, has come no closer to understanding the unfolding of the strategy process inside of the leader's head. Indeed, when it comes to decision making, it may well be that there is much more to it than meets the eye (Mintzberg, 2001).

2.5.3 Research study stance

Since senior management both individually and collectively make decisions that affect the strategic outcomes of an organisation, it is acknowledged that these decisions are not *"'...just rational (or boundedly – rational), but also driven by intuition and emotion. Research on the strategy process has for the most part ignored the role of intuition and emotion in strategy making and implementation. This is an important new area for research.'"*
Chakravarthy, & White, (2001: n.d.).

2.6 Leadership: Transformational versus Transactional

2.6.1 Core tenets

The leadership influence of top management in coaching and guiding is quite powerful (Bass, 1990; Sashkin, 1992). For risk taking to occur, members of the organisation throughout must feel that in terms of their leadership experience, trust is in place, (Avolio, *et al.,*1991). No members should feel any violation of vulnerability (Daft, 1999; Smith, *et al.,* 2004; Daft, 2005). Bass (1990) gives a detailed account of a transformative leadership style which may well resonate with the deployment of intuitive use (Patton, 2003). Since the study explores the role of Intuitive Intelligence in strategic decision making, this offers another angle with which to view the transformational versus transactional leadership styles.

2.6.2 Agency theory and the role of the Board

In terms of strategic decision making, the role of the board may also be considered within the context of Agency theory, where the agendas of external board directors and internal corporate executive strategic decision makers may differ (Stahl & Grigsby, 1991). Agency theory proposes that if personal goals motivate senior executives, then their goals will conflict with the owners' goals. Hence the agents' (senior executive's) differing goals, for example, personal growth, increased compensation, increased power base; may conflict with the organisation's / owners' goals of profit maximisation. Due to these, agency costs such as executive incentive programmes are incurred by the organisation. In addition to these, senior executives' conflict with ethics and governance will predominate.

2.6.3 Critique

Since Agency theory involves the motivation of some powerful executives to use the organisation to fulfil their own agenda, the board ensures that more executives are held accountable for their actions and decisions (Stahl & Grigsby, 1991).

2.6.4 Study Stance

The research study stance recognises that executives may harbour their own agenda to the detriment of the organisation. However, displaying ethically accountable, coherent strategic behaviour would require certain sets of abilities or core competencies from top management when faced with strategic challenges (Reynolds, 2006). This set of master competencies, (intelligences) in business executives, would form part of their arsenal and toolkit when facing various challenges.

2.7 Game theory

An elucidation on competitor decision making is offered by Game theory; the core tenet of which is explained below.

2.7.1 Core Tenets

Game theory involves understanding competitor behaviour and strategic decision making. (Bowman, Singh & Thomas, 2001: n.d.). The value of Game theory enables modelling the decision making of the various competitors in an industry, with individual players engaged in competitive behaviour, but where the system or market is restored to equilibrium by the moves of collective players.

2.7.2 Critique

While it is acknowledged that Game theory contributes to the understanding of competitor moves within an industry, there are researcher concerns that the high levels of rationality accorded to the decision makers may be worthy of a certain scepticism; and that better use of Game theory may be found in local competitive problems rather than global ones. An understanding of competitor decision making may well be complemented by zooming into strategic decision-making at a micro level.

2.7.3 Study Stance

A closer look at Game theory may provide an opportunity to uncover the concealed complexity thereof. Closer scrutiny may complete a specific game scenario in terms of microdynamics such as personal and interpersonal factors influencing decision outcomes.

2.8 Cognitive Mapping

This study utilises a cognitive framework to facilitate a similar scrutiny into strategic decision making.

2.8.1 Core Tenets

Cognitive mapping appears to be another way to explain strategic decision-making. An example of cognitive mapping is the CEO's interpretation of his/her competitive landscape to allocate resources, products and personnel, and engage in strategic decisions. Cognitive mapping is explained on three levels: (Porac &Thomas, 2001: n.d.).

- **Cognitive content**: relates to what top management perceives, assumes, believes and knows. Such content is gained through work experience, training and educational backgrounds, and these variables also cause differences in the various cognitive mental modes.
- **Cognitive structure:** relates to how the information or knowledge is arranged and interpreted in the executives' mind.
- **Cognitive style:** explains how the person gathers and processes information, and how he/she responds to the challenges using this information (Whittington, *et al.,* 2002). For example, in this study the cognitive style inventory undertaken by senior executives provided valuable insight in terms of their intuitive input into strategic decisions, both effective and ineffective.

2.8.2 Critique

Even though terms are used interchangeably in the cognitive mapping framework, for example: 'world view,' strategic frame', 'cause map'; it is recognised that the three areas are interdependent. For example, new

cognitive content may have an effect on cognitive structure, and cognitive style may limit the ability to process new information.

2.8.3 Study Stance

In spite of blurred conceptual terminology, the value of the cognitive lens is acknowledged and is hence utilised to zoom into the 'world view' of the strategic decision maker.

2.9. Intelligence Theory

Strategic decision makers face constant challenge in terms of negative impacts on the organisation. The success of such decision making is for the most part credited to the intelligence of such strategic decision makers (Sternberg, 2000; Emmons, 2000). The study thus explores intelligence within the conceptual framework of definition, prerequisites, criteria and critique.

2.9.1. Core Tenets - Intelligence Theory

"But science can never proceed completely inductively. We might conduct every conceivable psychological test and experiment, or ferret out all the neuroanatomical wiring that we desired, and still not have identified the sought after human intelligences." (Gardner, 1993: 59)

2.9.2 Definition

It is unlikely that a completely comprehensive definition of Intuitive Intelligence exists, just as *"'...there can never be a single irrefutable and universally accepted list of human intelligences.'"* (Gardner, 1993: 59). Gardner does however, propose eight criteria or 'signs' of intelligence. He explains as follows:

"'... the effort is to sample as widely as possible among the various criteria and to include within the ranks of the chosen intelligences those candidates that fare the best.'" (Gardner, 1993: 62).

Gardner states two *prerequisites* for intelligence (as a precursor to the eight intelligences).

2.9.3 Prerequisites of intelligence

Gardner (1993: 60), states that, in order for an intelligence to make it to the 'master list of intellectual competencies', there must be two prerequisites to be complied with. The first is that the intelligence must enable *'"...the individual to resolve genuine problems and or difficulties which he or she encounters."'* (Gardner, 1993: 60).

There is also the resolution to create "'...an *effective product...*'"(Gardner, 1993: 60), or outcome. One would take it then that given a problem within the domain of complexity and uncertainty, a business leader applying a set of intelligences within an organisation would have do so effectively, judged by the outcome of a decision, especially a strategic decision.

The second pre requisite must *"'...entail the potential for finding or creating problems - thereby laying the groundwork for the acquisition of* new knowledge.'" (Gardner, 1993: 60). The search for new knowledge is an extremely important pre-requisite within the context of risk and uncertainty, as it is understood that new knowledge has no previous precedent. Also as Gardner points out, these two prerequisites are found to be valid within a cross cultural context. If these are the prerequisites, what then are the criteria applied to intelligence?

2.9.4 Criteria of Intelligence

- Potential isolation by *brain damage* - in that a particular part of the brain may be destroyed, or spared in isolation, or as a result of such damage where "'...its relative autonomy from other human faculties seems likely.'" (Gardner, 1993: 60).

- Existence of *exceptional individuals* such as prodigies; idiot savants – showing that human intelligence can act in isolation in spite of highly retarded human performance.
- An *identifiable core operation* or set of operations. An example given by Gardner is the ability to distinguish or have "'...sensitivity to pitch relations as one core of musical intelligence...'" (Gardner, 1993: 60). The ability to imitate body movements by others as a core of bodily intelligence. Gardner (1993) acknowledges though that identification of these cores is still largely speculative...

2.9.5 Evolutionary and developmental history

A distinct developmental history, along with a definable set of expert *'end - state' performances,* where Gardner states that "'...intelligence should have a developmental history...'". (1993: 64). By way of example the intelligence should be identifiable in the novice and distinguishable in the expert (as expertise). One of the imperatives is thus the identifiable developmental history of the intelligence. To support this, an evolutionary *history* adds to the plausibility of an intelligence. It is clear that brain development in humans for example has passed through the evolutionary passage of history (Ornstein, 1991).

2.9.6 Support from experimental *psychological* tasks

This is by means of methods from cognitive psychology for spatial and linguistic processing shown by "'...studies of tasks that interfere (or fail to interfere with) one another; across cultural contexts.'" (Gardner 1993: 65). Experimental psychology can help explain how domain specific abilities can manifest in the carrying out of 'complex tasks' (Gardner 1993: 65).

- Support from psychometric *findings*

Gardner (1993) points out two critiques in justifying why intelligence tests may not back up his theories. The first being that an intelligence test does not always test what it is supposed to – a supposed validity issue. The second being an issue of pencil paper tests carrying their own stressors.

The issue of interpretation of psychological findings also complicates matters.

- Susceptibility to encoding in a symbol system

Symbol systems such as language and communication represent a large body of knowledge for humans. Examples are language, picturing and mathematics for human survival and progeny. Gardner describes an example of a primary characteristic of intelligence as its '"...natural gravitation towards embodiment in a symbolic system.'" (Gardner 1993: 66).

2.9.7 Critique

Sternberg (2000), proposes an alternate triarchic theory of intelligence, based on three basic components: Firstly, the performance related meta-component enabling planning and problem solving. Secondly, the knowledge-acquisition component which enables a person to encode, combine, and compare information. It is also that which enables new learning to occur. Thirdly, given a developmental ability over time, these components can be categorised into the intelligence criteria of: Performance, Ability and Development. Sternberg also makes an attempt to validate his theory with empirical evidence, leading to criticisms that Gardner's theory appears to be a list of descriptors; a synthesis of intellectual competencies previously identified Sternberg (2000).

2.9.8 Research Study Stance

In terms of this research study, the view of intelligence includes not only intellect, but an ability to solve problems and make effective decisions in the absence of certainty. In this sense, an integrated view of intelligence is taken, one which knowledge generation forms an integral part of. Thus in this perspective, intellect and the 'certainty of knowledge' (Gardner, 1993: 59), is only part of the equation of intelligence. This view is supported by Van Krogh, Nonaka & Nishguchi (2000). In terms of the stance on intelligence, the study must show if the person, (in this case the business leader), is able to generate the knowledge needed in order to make effective decisions.

In terms of implications for the study, cognisance was taken of how often Gardner used the term 'intuitive' when describing how an intelligence comes to be, for example in Gardner's description of how a linguistic intelligence comes to be (Gardner, 1993). "*The poet must understand, intuitively, the rules of constructing phrases as well as the occasions on which it is permissible to flout syntax, to juxtapose words that, according to ordinary grammatical principles, should not occur together.*" (Gardner, 1993:76). Also, in describing intelligence; the same use of the word 'intuitive' recurs, in this case, to try and define the very nature of musical intelligence.

- **Musical intelligence**

Such intelligence is defined as the ability of individuals to discern meaning and importance in sets and sequences of metrically arranged pitches, which are rhythmically arranged, serving as a means of expression of self, and communication with other individuals. *"The approach is intuitive, based solely on what is heard irrespective of any theoretical knowledge about music."* (Gardner, 1993: 110). So important is this intuitive understanding of music in a child, that, if later formal musical tutelage does not successfully incorporate the intuitive mode, it may as Gardner points out, *"'...ultimately prompt the child to cease altogether participating in musical life'"* (Gardner, 1993: 111).

- **Spatial intelligence**

Even of spatial intelligence - at bare basics, the ability to perceive space or form, to orientate an object in space, and distinguish and find one's bearings in different locales, the intuitive descriptor is associated with Einstein's intelligence as follows: "His intuitions were deeply rooted in classical geometry." (Gardner, 1993: 190).

Gardner concedes that *"'...certain more general abilities may override, or otherwise regulate, the core intelligences'"*, (Gardner, 1993: 68). The 'know how' or tacit knowledge reference on how to do something is used to

describe the sets of intelligences as opposed *to* know-what or know-that knowledge. In delimiting his conceptualisation of intelligences, Gardner (1993) elucidates that intelligences are not:

- a sensory system. (Intelligences are said to utilise one or more sensory systems rather).
- that which does not have a biological basis, and
- that which does not operate according to its own procedures.

In fact, Gardner cautions, *"It is thus a mistake to try to compare intelligences on all particulars; each must be thought of as its own system with its own rules."* (Gardner, 1993: 68).

It appears strange that the root intuitive factor deemed by Gardner (1993), to be so utterly important in the development of both musical and linguistic intelligence is not in fact, further explored. In fact, given the development of this intuitive inherent streak, it might be asked: Is this intuitive factor, an actual evolutionary intelligence - an evolutionary *Intuitive Intelligence*?

There are in fact *further* examples of this intuitive root of recurrence in describing Logical - Mathematical intelligence (Gardner, 1993). '*"...Initially, this prosecution of an extended line of reasoning may be intuitive. Many mathematicians report that they sense a solution, or a direction, long before they have worked out each step in detail..."* (Gardner, 1993: 139).

The evolutionary intelligence possibility certainly appears to exist, particularly as this intuitive ability appears to be linked to successful performance, as Gardner (1993), points out in the commentary on mathematician von Neumann. *"Thus he demonstrated a power of intuition denied to his colleagues, one of whom said, 'Beyond anyone else, he could almost instantly understand what was involved and show how to prove the theorem in question, or to replace it by what was the true theorem."* (Gardner, 1993: 143). This is clearly indicative of the ability to generate knowledge. As such, if this ability is generated by an intuitive driver, then it seems appropriate to take Gardner's cue and examine what exactly the theory around intuition offers.

2.10 Intuition theory

The study deepens the investigation into the scientifically sound knowledge domain around Intuition.

2.10.1 Core Tenets

Agor (1989) contextualised intuition within business as a form of human capital which enabled the growth of competitive advantage within an organisation. To better understand why business leaders with that core competence of Intuitive Intelligence are needed; to better understand the business case for Intuitive Intelligence; and why Intuitive Intelligence in decision making process, is the quest and scope of this research study.

Describing a state between waking and sleeping, Rowan (1987: 151), uses a description of Alyce Green, a biofeedback specialist in the Topeka Menninger Foundation to explain the workings of intuition manifesting as the Eureka factor :

"At these two times, while in a sort of no-man's-land between being asleep and awake, the conscious and unconscious minds are in closest touch." (Rowan,1987: 151)

2.10.2 Critique

Simon's theory of bounded rationality explains why leaders make decisions within a limited information processing realm. However, it still does not shed light on Mintzberg's (2001) argument indicating the leader's use of another ability (intuitive in nature), under conditions of risk and uncertainty. This is an approach to problem solving and decision making that bounded theory does not completely explain. Pettigrew, *et al.,* (2002), concur that entrepreneurship and innovation are not adequately accounted for under bounded theory.

2.10.3 Research study stance

The argument posited in this study is that the leader's intuitive decision making develops over time and use, into an Intuitive Intelligence. That this Intuitive Intelligence has not been previously written about within scientific realms is perhaps due to the various perceptions that abound with regard to intuition itself. Some of these preconceptions relate to intuition being misconceived as a paranormal power. However, Taylor, (1980) debunked these myths when he tested for precognition among two groups of executives (thirty each). His findings show that although 80% of the executives believed in the existence of ESP; there was in fact *"'...no significant difference between the scores actually achieved and chance level...'"* (Taylor, 1980: 161). Thus Taylor concluded that none of the executives appeared to have 'paranormal' powers' (Taylor, 1980: 161)

The stance taken in this study also is that Intuitive Intelligence in decision making is not within the realm of the paranormal, (Wilson, 1976), but rather a natural ability which is present in executives, and which may develop over time (Vos Savant & Fleishcer, 1990; De Bono, 2009). However, just how the faculty of Intuitive Intelligence is used in order to enable effective strategic decisions is the challenge in terms of existing knowledge; and the gap that this study seeks to address.

Figure 2.10 locates the gap in terms of Intuitive Intelligence and the key personal, interpersonal and professional competencies necessary for effective business practice and performance (Whetton, 2007; Robbins & Hunsaker, 2009). Although the inventory is not exhaustive by any means, it does include those skills most expected to be contained in a 'leadership response tool kit'. These skills include:

- Self awareness
- Management skills and competencies: such as planning, leading, motivating, delegating, communicating, problem solving / decision making.
- **'Intuitive'** skills (Robbins & Hunsaker, 2009) in areas of leadership decision making, including practise and experience in the use thereof.

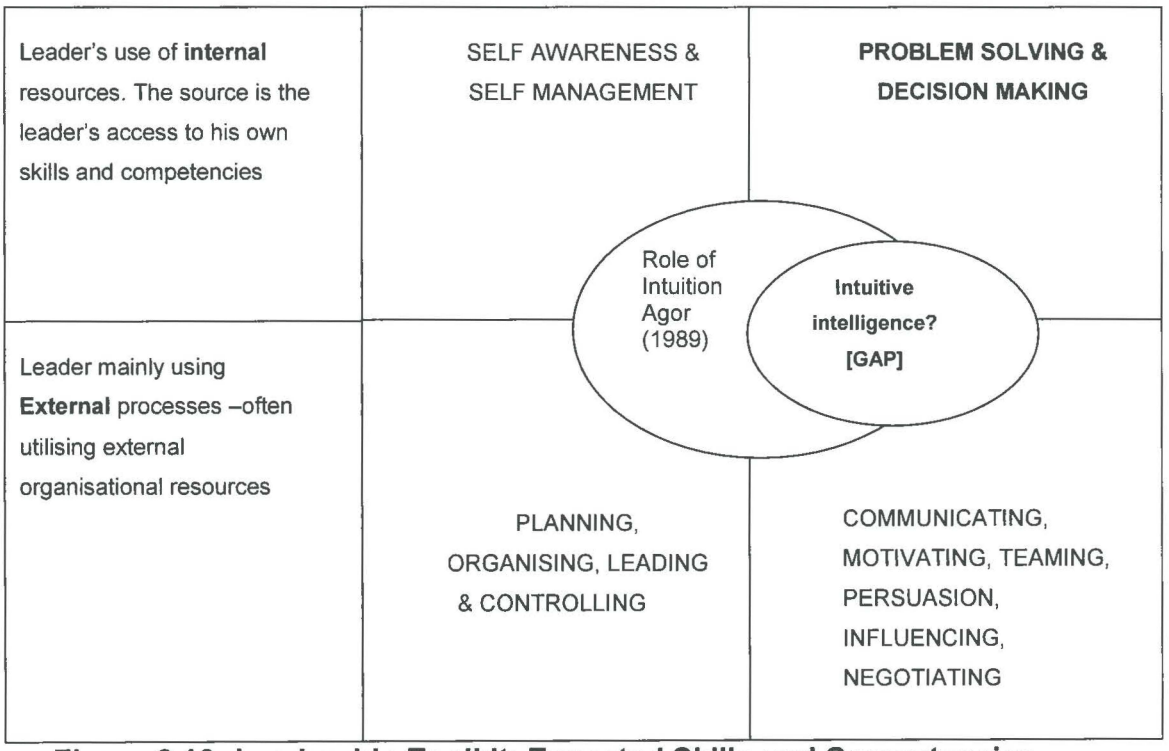


Figure 2.10: Leadership Toolkit: Expected Skills and Competencies

Adapted from Robbins & Hunsaker (2009: 4)

While it is acknowledged that all of the above processes involve the utilisation of the leader's own internal resources, (Sutton, 2004), it is

important to clarify the broad areas of leadership skills and competencies (bold text in Figure 2.10) that fall within the scope and focus of the study. It is really in the unpegged area of strategic leadership decision making, that Intuitive Intelligence is being investigated.

2.11 Contribution of research study

- Effective strategic decision-making

Besides the discussion around gaps in research, Agor (1989) pointed out that brain skills have an important impact on management preference and productivity. Cognitive blink as Gladwell (2005) suggests is that intuition bypasses the usual 'thinking' pathways to 'see' the solution or action or decision to be taken. Gladwell proposes the use of 'thin-slicing' as an alternative ability. This is the opposite of what is experienced as 'analysis paralysis' (Agor, 1989), where too much 'thinking' renders the decision maker ineffective - virtually paralysed into indecision and inaction. This is clearly the very antithesis of an effective leader. Thus this study contributes to the understanding of how the business leader makes effective 'spot on' strategic decisions using Intuitive Intelligence. Furthermore, the study undertakes to flesh out the narrative of Intuitive Intelligence in a scientifically robust manner.

- Strategic Planning

Interestingly, Stahl & Grigsby (1991) offer, in their explanation of the evolution of formal strategic planning, what could also be an evolution of the role of the senior executive in terms of an intuitively intelligent strategic practitioner.

Table 2.1. Evolution of Formal Strategic Planning.

Effectiveness of Formal Business Planning	Phase 2	Phase 2	Phase 3	Phase 4
Value System	Operational Control. Annual Budget. Functional Focus	More effective planning for growth. Environmental Analysis. Multiyear forecasts. Static Allocation of resources.	Increasing response to markets and competition Thorough situation analysis and competitive assessment. Evaluation of strategic alternatives. Dynamic allocation of resources.	Orchestration of all resources to create competitive advantage. Strategically chosen planning framework. Creative flexible planning processes. Supportive value system and climate.
	MEET BUDGET	***PREDICT THE FUTURE***	***THINK STRATEGIC-ALLY***	***CREATE THE FUTURE***

Stahl & Grigsby, (1991:20)

Table 2.1 shows the model of organisational evolution of strategic management, from planning to management. Phase 1 involves financial planning, and where operational control is improved by financial control. Phase 2 shows the time line of the organisation being extended beyond the following financial year. Attempts are made to predict impact of future events on the organisation. Phase 3 is where the response to market conditions is not only planned for, but anticipated with regard to strategies of competitors. Phase 4 is at the level where resources are strategically managed to create competitive advantage. This process conceivably requires conscious focus and purposeful effort, with lessons learnt along the way. Could this be perhaps a path trod by the intuitive strategist in the efforts to develop Intuitive Intelligence?

2.12 Summary

Chapter Two reviewed the theoretical foundation impacting on the leaders' strategic decision making paradigm. Chapter Three will continue to shed light on the gaps highlighted in Chapter Two, mainly the leaders' ability in terms of decision making under conditions of risk and uncertainty. The often uncanny ability of leaders to call it right appears to arise from intuitive origins but may well develop into what is ontologically intelligent in nature – an Intuitive Intelligence which provides areas of certainty and knowledge to business leaders in times of need. It is thus pertinent to indicate the gap in knowledge in terms the limited knowledge construct of Intuitive Intelligence. What it is, what it comprises of, how it is used, is not yet within the realm of scientific knowledge, and will thus form part of the research quest; further explored in Chapter Three.

CHAPTER THREE

LITERATURE REVIEW

"'[Intuition]...can be a powerful force in complex and fast-moving business environments and can lead to improved executive decision-making capabilities through the development of a finely tuned Intuitive Intelligence.'"

(Sadler – Smith & Shefy, 2004: 87)

3.1 Introduction

This chapter examines the golden and oft elusive thread of the 'development' of intuition into something infinitely more valuable to the strategic decision maker: 'Intuitive Intelligence'. The opening quote makes a rare reference to Intuitive Intelligence, and the research aims to explore this construct more fully. A cross examination and deconstruction of extant academic literature on intuitive decision making was done in order to build on the definition of Intuitive Intelligence. The mandate of this study is therefore to understand the phenomenon of Intuitive Intelligence, how it applies within the strategic decision making context and how intuition serves as a basis for Intuitive Intelligence.

3.2 Why Intuitive Intelligence in Business

While the body of literature around the phenomenon of intuition continues to grow, Barnard (1938) was the very first to formalize thinking around the *business* value of intuition. Thereafter, in 1989, Agor contextualised intuition within business as a form of human capital which enabled the growth of competitive advantage within an organisation (Agor, 1989; Mintzberg, 2001; Denton, 1998). His work blazed a trail for others to follow.

This study explores that trail, (Frank, O'Reilly, & Curran, 2006), with the question raised at the outset in terms of intuition behaving at times very much like an intelligence i.e. Intuitive Intelligence. Research literature acknowledges that leaders make strategic decisions using intuition, (Mintzberg, 2001). It is also acknowledged that intuition per se can lead to *ineffective* strategic decision making (Miller & Ireland, 2005).

The fact that certain intuitive decisions have a positive rather than a negative outcome, implies that the intuitive input was effective in the one and not in the other. What then, was the differentiating factor(s) in terms of effective intuitive input?

All things being equal, if two strategic decisions are made using a gut feel component, yet turn out very differently in terms of outcome effectiveness; what then does that say about the ability of the strategic decision maker to use intuition as an intelligence, i.e. Intuitive Intelligence - as opposed to using intuition and achieving a negative outcome? To better understand what it is that happens in terms of intuitive input during the strategic decision making process and how this intuitive ability may evolve into Intuitive Intelligence is the remit of this study. However, it is in seeking innovative insights within the strategic context that the difficulty with studying strategic decision making in senior executives lies; as their 'stream of actions' (Mintzberg, 1989), is difficult to follow and evaluate, particularly within a resource based; dynamic, strategic imperative, (Rumelt, *et al.,* 1981; Teece *et al.,* 1991; Grant, 1991; Crossan, Lane & White, 1999; Prahalad & Hamel, 1994; Porter, 2004; Tarabishy, 2005). However, it is to this task that the study commits.

As far back as 1936, Chester Barnard drew attention to the perception of intuition placed juxtaposed to logic driven analysis (Barnard, 1936) - a dichotomy which still holds true today (Miller & Ireland, 2000):

"Habitual analysis, in other words, may teach more about a thing, but may at the same destroy the thing as a whole. It is not without significance to me that several of 'brainiest' and most effective and capable men I have met have been almost inarticulate. Not what they could say but what they could do showed the power of their minds. Many glib talkers and writers, not being capable of understanding such men, read into their silence either inferior intellects or sinister purposes. It is an error of judgement well to avoid in your own careers." *Barnard, (1938: 15)*

This study seeks to establish the current status of this dichotomous position, and attempts to demonstrate whether any shift has occurred in the status of intuition in the mind of the senior executive.

3.3 Business Practice and Intuition

In the Power school of strategy, politics is concerned with the gaining of advantage (Robbins & Hunsaker 2009). The power to manipulate symbols through oral persuasion is such an advantage. How the leader uses politicking skills to benefit – attempting to influence the distribution of outcomes and advantages – calls upon people skills and emotional intelligence (Robbins & Hunsaker, 2009), since those with higher emotional intelligence (EI) are greatly advantaged by a keen awareness of their own feelings and those of others.

It is suggested that intuition enables the self awareness necessary for emotional intelligence. As the primary intelligence concerned with survival, the implication is that intuition may constantly be evolving. This also implies an important link between self awareness (the link to intelligence), and a better outcome in terms of decision making (Gluck, Kaufman & Walleck, 1982). However this may not easily be accomplished, as cautioned by Crossan & Sorrenti (1997).

3.4 Barriers and Blockages to intuitive development

The four C's discussed in Crossan & Sorrenti (1997) are those factors that block an individual from risking improvisation or spontaneous ad hoc action

in the workplace. These are, the desire to be:

- Competent,
- Comfortable,
- Consistent
- Confident.

Given the intuitive nature of improvisation, it is also likely that these factors inhibit the use of intuition per se. Agor (1989) also listed factors that inhibited demonstration of intuition in the workplace. These are:

- Rigid hierarchical, bureaucracies and reporting structures
- Resistance to new ideas
- Criticism and unwillingness to try new ideas/solutions

3.5 Thesis refreshed

The thesis proffered, and position adopted in this research study is thus the following: Intuition may be able to develop into a form of intelligence i.e. referred to as Intuitive Intelligence (Sadler – Smith & Shefy; 2004); and symbolised in this study by [II]. This form of intelligence may well serve as an input into ***effective*** strategic decision making. How this occurs poses a gap in research, and is the departure point of enquiry that unpacks what is meant by intuitive intelligence. But what does intelligence itself mean?

3.6 Definition of Intelligence

Since this study relates to intuition and the evolution thereof into an Intuitive Intelligence, the following elucidates the quintessential definition of intelligence in terms of intelligence theory: *"'...the theory of general intelligence (Jensen, 1998; Spearman, 1927), specifies that there is a general factor of intelligence that pervades intellectual tasks and speculates what the source of this general factor might be (mental energy, speed of neuronal conduction, etc.). Theory does not specify, however, the origins of g - whether this general factor is hereditary, environmental, or both in origin.'"* (Sternberg, 2001: 234)

While it is acknowledged that the definition of intelligence is by no means universal, what is accepted as the main indicator of intelligence is that it is displayed in a set of abilities (Sternberg, 2000).

3.6.1 Ability

Behavioural abilities that fundamentally indicate human intelligence (among others), are speed of learning, problem solving, and decision making (Sternberg 2000: 217). Decision making was linked with problem solving, and was within the remit of this study. However it should be noted that other abilities mentioned were communication and concept formation, counting, and use of tools - an early intelligence indicator in the animal species (Sternberg, 2000). Why this is relevant is that a parallel can be drawn to current times where the use of computers and other devices is essential for executives. Problem solving and decision making is certainly highlighted though, as it is the area of strategic decision making that is the focus of the study. Ability is a key criterion for intelligence, and also includes those drawn from the field of Psychometrics (Sternberg, 2000). The spectrum includes inductive reasoning, spatial orientation, perceptual speed, numeric ability, verbal ability and verbal memory. Thus encompassing what is meant by ABILITY in terms of the key criteria of intelligence.

The second criteria of intelligence stipulated by Emmons (2000), relates to performance.

3.6.2 Performance

Performance in terms of intelligence alludes to how individuals use these abilities and processes to adapt to multiple situations (Sternberg, 2000). Context is in terms of the specific conditions, constraints and opportunities presented in the environment and the individual's adaptation thereof to provide a better fit. Context further refers to:

- adult working context (the stimulation versus the passivity of daily life and work activities

- complexity – "...the extent to which one's work related activities involve independent thought and judgement'" (Sternberg, 2000: 128). This is otherwise called substantive complexity). Complexity is seen to be important in adult intellectual development and intelligence. Sternberg (2000) describes research findings related to an increase in intellectual *performance (*intelligence tests) when there was greater substantive *complexity* present in the working environment. This is relevant as this study was conducted with senior executives with over 10 years work experience, and who faced considerable complexity. In terms of the development of intuitive ability and certainly Intuitive Intelligence in senior executives, the ***third*** criteria of intelligence is described.

3.6.3 Development

Development in terms of intelligence criteria refers to the individual's development within the context of his/her life–span inclusive of social, cultural, and historical and ontogenetic (embryo to adult) changes; where intelligence development is defined in terms of adaptation and optimal fit to environment. This is also referred to as the 'çontextualist' approach (Sternberg 2000: 127). Although more research is indicated in terms of the development of the adult's abilities and their adaptation to differing contexts. Of note are the three factors of complexity, problem solving, and domain familiarity (Sternberg, 2000).

Thus, to open up the topic of the role of Intuitive Intelligence in leadership decision making the literature may thus be conceptually organized and reviewed under the following headings in order to highlight gaps and to facilitate a firm grasp on the extant literary status:

- Definition of Intuitive Intelligence?
- Benefits of intuition in leadership decision making?
- Areas where intuition is best used?
- Types of intuition?
- Abilities of intuitive decisionmakers?
- What are the properties of Intuitive Intelligence (components)?
- Measures of intuition?

- What is the process involved in using Intuitive Intelligence? What are the triggers, facilitators, inhibitors, risks and dangers?

3.7 Definition of Intuitive Intelligence - Gap in literature

While most definitions of intuition are intermingled conceptualisations, and tend to acknowledge the unconscious source of this phenomenon (Barnard, 1938), it is noteworthy that not once in the literature on wisdom (Sternberg, 2001), is Intuitive Intelligence defined, nor linked with wisdom (phronesis), although the terms used to describe phronesis and Intuitive Intelligence are similar. Such similar frames of reference as used to describe 'phronesis' may also be linked to Intuitive Intelligence; for example, multi perspectivity in decision making, which is said to be part of the traits of a 'phronetic' person (Aristotle, 1999: 4). The links to ethics and moral values (Baumeister & Newman, 1994) also resonate with the use of intuitive intelligence (Sonenshein, 2007). Behling & Eckel (1991) add to the normative dilemma in terms of attempting to define intuition:

"'...those who write about intuitive decision making in management, in fact, conceptualize intuition in six distinct ways: as a paranormal power or sixth sense, personality trait, unconscious process, set of actions, distilled experience, and residual category.'"

(Behling & Eckel,1991:46)

However, there are also core conceptualisations which are relevant in terms of criteria of intelligence (Freshman, 1999), espoused by leading intelligence proponents such as Gardner (1996) and Sternberg (2000). In terms of Gardner's (1993), Multiple Intelligence Theory(MI), the definition of intelligence entails :

"'...a set of skills of problem solving – enabling the individual to resolve genuine problems or difficulties that he or she encounters and, when appropriate, to create an effective product - and must also entail the potential for finding or creating problems – thereby laying the groundwork for the acquisition of new knowledge.'" (Gardner, 1993: 60)

According to Gardner, the components of intelligence were originally seven-fold, before his eighth intelligence discovery (Gardner, 1996).

3.7.1. Multiple Intelligences according to Gardner (1996)

Gardner listed the original seven intelligences and their end states as follows: Gardner *et al.*, (1996: 205-211)

- Linguistic intelligence – pinpointed by neurobiology which shows the core information processing mechanisms associated with this intelligence. Indicated by speech sounds, syntax (grammar), semantics (meaning), and pragmatics (implications of language use in various settings). Linguistic intelligence is relevant for journalists, lawyers, lecturers, among others.
- Musical intelligence – where people can create, communicate and understand meanings out of sound. Core components include processing for pitch, rhythm, and timbres (sound quality). Developed end states could be found in composers, conductors, and instrumentalists among others.
- Logical – mathematical intelligence – using abstract relations. Abstract thinking involves exploring and ordering objects, and progresses to making propositions about real or possible actions and relationships. End states in developed forms may be seen in mathematicians, computer programmers, and financial analysts.
- Spatial intelligence – the ability to perceive and act upon visual or spatial information. Core developed end states include ability to construct 3-dimensional images, and to work with them in various forms and positions. Such as done by surgeons, navigators and pilots.
- Bodily – Kinaesthetic intelligence – involves use of all or parts of one's body to solve problems or fashion products. End states include choreographers, dancers, and rock climbers.
- **Intrapersonal** intelligence – helps a person to distinguish among their own intents, self knowledge and to draw good mental models of themselves. End states include individuals who know their own abilities, and are able to make good decisions about their lives. This intelligence acts like the *"'...central intelligence agency...'"* (Gardner, 1996: 211) giving individuals the power to know themselves, their abilities, and the best use thereof. This link to a

central intelligence agency is to be noted with respect to the role of Intuitive Intelligence.

- Interpersonal intelligence – involves knowing others' in terms of others' feelings, beliefs, and intentions, and yet the individual may be totally unaware of their own: Developed end state abilities may be embodied in Dr Martin Luther King, and Mother Theresa.

Central to the argument of intelligence is Gardner's reference to 'information processing mechanisms'. Gardner (1993: 63). *"One might go so far as to define a human intelligence as a neural mechanism or computation system which is genetically programmed to be activated or 'triggered' by certain kinds of internally or externally presented information."* (Gardner, 1993: 64).

This information processing link may be valid in terms of how Intuitive Intelligence manifests when examining the definition of intuition as an ability which *allows "'...information processing to occur, albeit at a level which the individual may not be aware of...'"* (Robbins & Hunsaker (2009: 34)

3.7.2 Critique – Multiple Intelligence

The definitions of the separate intelligences could be somewhat more conclusive. In fact, Gardner himself recently acknowledged that there may actually be more or fewer intelligences than the seven he has outlined. For example, he recently described an eighth as *"...naturalist intelligence."* (Gardner,1996:203). Gardner's theory that the intelligences are autonomous are criticised on the basis that abilities are positively correlated. To this Gardner asserts that the psychometric assessments test not just aptitude but paper and pencil skills as well.

Gardner's theory of multiple intelligences has interesting links in terms of potential findings of this study. These may be (albeit at this stage speculative) as follows:

- Intuitive Intelligence behaves as an intelligence in terms of its ability to provide information in uncertain situations
- Ability to process information on a subliminal level.

- Decision making effectiveness is enhanced as intuition is developed into Intuitive Intelligence.
- Linked to the CIA (central intelligence agency) in Gardner's intrapersonal intelligence.
- Linked to symbol systems in terms of intelligence where: "'*...a primary characteristic of human intelligence may well be its 'natural' gravitation toward embodiment in a symbolic system.*'" (Gardner,1993: 66)

A final link in terms of multiple intelligences is with regard to the conceptualisation of intelligences which *"...exist not as physically verifiable entities, but only as potentially useful scientific constructs."* (Gardner, 1993: 70).

3.7.3 Triarchic theory of Intelligence

In terms of another relevant conceptualisation of intelligence, Sternberg's Triarchic theory of Intelligence (Sternberg, 2000), the workings and variables affecting intelligence are unpacked as per three sub theories as follows:

- **Componential** - Where three components are identified: Meta components (used to plan, and problem solve), performance components (operationalise problem solving tactics), and knowledge-acquisition components (enable a person to encode, combine, compare information, and enable new learning to occur). (Gardner *et al.,* 1996: 225).

- **Experiential** - expands on the role of experience in intelligence. Experience on a task falls on a continuum from novel to automated. Intelligence here is then defined in terms of two abilities - the ability to work through novel tasks and the ability to automate information processing. This is highly relevant as Intuitive Intelligence in relatively novel situations is thought to be what enables a person to make effective decisions in novel situations.

- **Contextual sub theory** – deals with the cognitive function and fit required to deal with specific contexts requiring adaptation, selection, and shaping the environment. This may be akin somewhat to how the senior executive deals with his or her specific environmental context.

3.7.4 Critique of Sternberg's theory is as follows

The main critique of Sternberg's theory (Sternberg, 2000) is that it appears to lack grounding in biology. However, applied to Intuitive Intelligence as a construct, the study links to the theory as follows:

- Experience does play a role, and hence resonates with the experiential aspect.
- Context counts in the use of Intuitive Intelligence, as it appears to be deployed under conditions of uncertainty, and novelty. This serves to resonate with the importance of context.

3.8 Conditions for intuition to develop into intelligence

Presupposing the above (current study) the ability to problem solve; pre-empt problems; and make effective decisions (Sadler-Smith & Shefy, 2007), all imply conscious effort on the part of the user. Foresight, also appears to be linked to intuitive ability, (Rowan, 1987; Klein, 2002). Although linked to successful leaders, (Senge, 1996; Tsoukas, 2003; Leonard & Swap, 2004; Shevel, 2009), it would be reasonable to expect that when leaders combine their intuitive foresight, coupled with experience and awareness, the outcome would be no less than an effective, intelligent mix. The ability to act counter intuitively would also de facto be indicative of Intuitive Intelligence (implying an intrapersonal awareness of intuition.)

3.9 Definition of Intuition

Intuition (applied intelligently) on the other hand, is defined as *"'...the capacity for attaining direct knowledge without the apparent intrusion of logical (thought or) interference.'"* (Sadler - Smith and Shefy, 2004: 81). It is further elaborated on as follows:

Intuition is "'...*a form of knowing that manifests itself as an awareness of thoughts, feelings, or bodily sense [here it is distinguished apart from instinct and tacit knowledge in that there is an awareness of body sense]; connected to a deeper understanding and way of making sense of the world that may not be achieved easily or at all by any other means...*'" (Sadler-Smith & Shefy, 2004:81). It is here, that intuition appears to display the potential to evolve as an intelligence.

3.10 Potential definition of Intuitive Intelligence:

In this study the gap of understanding what Intuitive Intelligence is, raised by Sadler–Smith & Shefy (2004), has been taken up. The focus on the evolution of intuition to the level of an intelligence led by the gap in knowledge moves from desktop to an empirical-based definition. This warranted a search for the 'extracted' definition of Intuitive Intelligence building on work of the gurus, and focusing on the criteria of intelligence (Emmons, 2000)

3.10.1 Criteria of Intelligence

The link between the criteria of intelligence and the study is explored in Table 3.1

Table 3.1: Criteria of Intelligence.

Criteria of Intelligence in Intuition	Ways in which this research probes criteria.	Prospects: Link to Objectives / Questions/Instrument
1. 'Intelligence must reflect performance rather than just a preferred way of behaving' (Emmons, 2000:58)	How to check performance when there is no definition yet? Beyond scope of research.	Check if the concept of intuitively intelligent performance can be probed e.g. batting average check ('How often did your intuitive decision turn out to be effective?')

2. The intelligence should define a set of abilities that are moderately inter-correlated with one another.	Checked for interlinks – Cognitive style inventory would indicate intuitive decision making style. Interview probes will reveal other abilities.	Check: Experience is relevant (Sadler-Smith & Shefy, 2004) – i.t.o senior executives and CEO's. Screening criteria involves minimum 10 years business experience.
3. Intelligence develops with age and experience, from childhood to adulthood.	Research will reveal whether effectiveness in decision making has improved over time.	To establish whether Intuitive Intelligence develops with age and experience, from childhood to adulthood? Age, experience factors : Sadler-Smith and Shefy (2004

Adapted from (Emmons, 2000: 58)

Thus more and more it seems amiss not to explore the trail of Intuitive Intelligence as an *evolving* intelligence.

Sonenshein, (2007) proposes a moral input in intuitive decision-making. Perhaps, given the gap in knowledge, the question may be asked whether there is a moral / ethical input which differentiates Intuitive Intelligence from intuition. Thus, leaders that lack Intuitive Intelligence and who only use unbridled intuition may risk the pitfalls described by Miller & Ireland (2005).

3.10.2 Components of Intuitive Decision making

In terms of a model, Burke & Miller (1999), link the decision making aspect of intuition in the following ways to answer the question: How did executives perceive intuition? They describe the response when executives were asked what they personally understood by the term intuition.

They listed the following as components of Intuitive Decision making.

- Experience–based decisions: Where intuition resembles a schema/mental map built up over years of practice.
- Affect–initiated decisions: Intuition as 'gut feeling', and where decision making has a central emotional element.
- Cognitive-based decisions: Intuition as based on learned knowledge and skills
- Subconscious mental processing: Intuitive decisions as a subconscious mental processing that occurs automatically in the background.
- Value based decision making: Intuition as personal introspection, whereby the decision generated is compatible either with company culture or individual's values.

In seeking a definition of Intuitive Intelligence from the departure point of intuition, one may ask the following: Is Intuitive Intelligence a cognitive experience based knowledge and skills grounded ability which the senior executive develops over time and practice in making intuitive decisions? And if so, what role if any, does Intuitive Intelligence play in executive strategic decision making. Are there any benefits which can be gleaned from looking at intuitive decision-making?

3.11 Benefits of intuition in leadership decision making

If intuition enables rapid decision making in the absence of all the complete information according to Burke & Miller (1999) then one may ask; does Intuitive Intelligence display the same benefits? If so, how would one increase one's Intuitive Intelligence towards making effective decisions? As indicated already by Sadler-Smith & Shefy (2004) this holds considerable benefit for the time-constrained business executive. Use of intuition also enhances effectiveness of organisational learning (by facilitating the creation of new insights and ideas), thereafter formalising the insights in systems and structures within the organisation. If intuition does have the potential to evolve into Intuitive Intelligence, it can be used in complex situations or organisations caught up in uncertainty and change (Crossan &

Sorrenti, 1997). Given that there are guidelines for intuition in terms of its pitfalls, (Miller & Ireland, 2005) a perceived benefit (from this research study), would be to have insight into principles and guidelines governing the use of Intuitive Intelligence in order to optimise its use in the workplace, and minimise risks and dangers in its use. The area of ethical leadership decision making is of considerable concern presently (Rumney, 2006; Gleason *et al.,* 2008) and some insight into the role of intuition would benefit executives embroiled in business ethical dilemmas. This would also address a gap in the literature regarding ethical guidelines for intuitive use.

3.12 Areas where intuition is best used include

New projects, where information is incomplete, (Matzler, Bailom & Mooradien, 2007) and where speed of decision making counts (Agor, 1989; Eisenhardt, 1999; Miller & Ireland, 2005). While these self same areas may also count in Intuitive Intelligence, without empirical research this is difficult to establish as a certainty.

3.13 Types of intuition

The following are types of descriptions showing the different forms of intuition in different contexts: discoveries, actions and decision making.

- Ordinary – gut feel, hunch (Rowan, 1987)
- Expert – 'Blink type' decisions (Gladwell, 2005)
- Strategic Intuition - Einstein–type discoveries (Duggan, 2007)

3.14 Abilities of intuitive decision makers

The literature offers guidelines in terms of certain abilities and characteristics expected of intuitive decision makers as seen in Table 3.2.

Table 3.2: Characteristics of Intuitive decision makers

Characteristics and Likes	Characteristics and Dislikes
Future oriented sees the possibilities (use of foresight)	Low tolerance of routine tasks
Sees beyond limitations and constraints to the possibilities that no one else does (a link to transformational leadership).	Difficult to see step by step tasks through to end (an implementer)
Inspires others with innovations	Bored with old problems
Works in bursts of energy	Consistency a problem
Often sees the solution to a problem as a whole (blink)	Jumps to conclusions; Dislikes time taken to be precise
Follow their inspirations (note the link to values, beliefs (in the MBTI), as well as the link to moral beliefs (Burke and Miller, 1999)	

Adapted from Robbins & Hunsaker (2009: 35)

Thus if the intuitive decision maker is future oriented, dislikes time taken to be precise, and furthermore jumps to conclusions, it stands to reason that decision making under such conditions would be problematic (ineffectual, and de facto unintelligent). But how can one measure such intuitive leanings?

3.15 Measures of Intuition

The Cognitive Style Inventory, (Table 3.3) in Robbins & Hunsaker (2009), and based on the Myers-Briggs Type Indicator (MBTI); (Myers & Briggs (1998), is widely used by organizations to determine cognitive and intuitive information perceiving, processing and style of functioning and offers some measure of intuition (Glaser, 1995). As with such tests, it is important to note the qualifier that, because leaders show up as having a personal characteristic (Jung, 1995; 2001), it does not mean that such a characteristic will dominate their behaviour at all times. The measures are purely to provide key information in order to get a clearer picture of one's preferences and tendencies (Glaser, 1995). These key indicators are: Extrovert or External energy focus (E), Introvert or Internal energy focus (I), Sensing, Intuiting (N), Thinking (T), Feeling (F), Judging (J), and Perceiving (P). These categories are used in this study, to assess participants' style of functioning.

Table: 3.3 Measures of Intuition

E - Extrovert-energy-prefers contact with others and things	I - Introvert-Self contained, works things out personally
S - Sensing-perceiving info-concrete info, facts, details	*N - Intuition-perceive info-things as a whole, focus on possibilities, imagination. Note the link to business wisdom.*
T-Thinking-decision making-emphasis on analysis, logic	F - Feeling –Decision making focus on human values, beliefs, personal connectedness with others.

J - Judging-preference for structure, order. Seeks decision closure.	P - Perceiving- preference for gathering info as much info as possible, prior to decision making.

Cognitive Style Inventory. (Robbins & Hunsaker, 2009:34)

In the study, senior executives using intuitive decision making were defined as those that scored high on the intuitive measure; with such measures being used to assess intuitive decision making style.

In terms of shortcomings of intuitive measures: With MBTI, the definitions of intuition still cause problems in intuitive measure. In Agor's Intuitive Measure (AIM), (Agor, 1989) the terms 'thinking style' is used to describe the analytic versus the intuitive. This may well be quite misleading. Cognitive blink in Gladwell, (2005) suggests that intuition bypasses the usual 'thinking' pathways and uses another part of the brain. Agor (1989) uses analysis paralysis and Gladwell (2005) uses 'thin-slicing' to refer to the decision maker's alternate but effective intuitive mode.

3.16 Process of intuitive decision-making

Intuitive Decision making: Unethical behaviour in the workplace raises issues around 'right' actions in the business practice arena e.g. Ponzi scam, in South Africa (Hawkey, 2009). Robbins & Hunsaker, (2009), expands on the process of decision making which uses an intuitive input. For example, the decision maker is advised to:

- Understand organization's policy on ethics
- Anticipate unethical conduct
- Gather all pertinent information
- Determine all affected parties
- Consider all consequences
- Avoid isolation and seek opinions from others
- Think creatively about alternatives
- Check your intuition

- Do what is truly believed to be right (*moral compatibility* link)
- Prepare to defend your actions

Adapted from Robbins & Hunsaker, (2009)

It is unclear from the intuitive input in this decision making process whether the decision was effective or ineffective, hence it would be useful to map where in the process an Intuitive Intelligence interjection / input would be, after evidence on Intuitive Intelligence is gathered.

3.17 Debunking Myths

According to De Paul and Ramsay, (1998:186): "'*Intuitions are mental occurrences…*' as in being able to make spontaneous (no-time factor) mental judgments, where:

"Any indictment of intuition on the grounds of thinness must be brought against introspection and perception as well, by parity of reasoning. If we doubt that we can know about the abstract through intuition, therefore we must equally doubt that we can know about the inner through introspection, or about our surroundings, through perception. For the moment, that seems defence enough of intuition." (De Paul & Ramsay, 1998: 268)

Although there is respect for intuition as a source of information, the caution is well founded that such information must be tested, to ensure fool proofing against the biases and blind spots which also slip through (Miller & Ireland, 2005). According to De Paul & Ramsey (1998): *"When empirical cognitive psychology eventually studies intuition, it will certainly uncover the fact that a subject's intuitions can be fallible locally."* (De Paul & Ramsay, 1998: 213). Furthermore, *"In principle, the verbal report of an intuition can be erroneous, either through imperfect self knowledge, verbal error, or insincerity."* (De Paul & Ramsay, 1998: 179).

Hence the prompt for this study, it appears, is to check what components are required to 'intelligen-tise' intuition. If De Paul and Ramsay's myth

debunking is to be accepted, it means a modicum of self awareness forms part of these components.

3.18 Summary

Despite the growing evidence for the evolution of intuition into Intuitive Intelligence, there are undeniable gaps in relation to what Intuitive Intelligence is as a construct, how it is used effectively by leaders, and by what process; and what other components if any, comprise Intuitive Intelligence. These gaps prevent a fuller understanding of the role of Intuitive Intelligence in leadership strategic decision making. Gaps which, in terms of this literature review warrant an investigation into whether Intuitive Intelligence forms part of the leadership toolkit for effective decision making.

CHAPTER FOUR

RESEARCH DESIGN, METHODOLOGY

"Good qualitative research depends on a combination of careful research and some imagination and intuition on the part of the researcher in deciding which theory and methodology will provide the best results for the particular topic under study." (Rice & Ezzy, 2002:26)

4.1 Introduction

Given the need for 'careful research', Rice & Ezzy (2002:26), the methodology designed to achieve quality evidence comes under scrutiny in this chapter. Various methodological issues and aspects are discussed in terms of the research paradigm, design, methodology and justification thereof. Chapter Four describes a dual phased design; Phase One and Phase Two. Each phase is discussed with regard to research design, research instruments, analytical techniques, reliability, validity, generalisability, parameters and scope, sample selection, implementation issues, ethical issues, and confidentiality aspects. Since the research question indicates that the phenomenon of Intuitive Intelligence studied in this research project is human and dynamic, the move toward the phenomenological (interpretivist) side is reinforced by use of methodologies from grounded theory and ethnography (Charmaz, 2006; Corbin & Strauss, 2008).

A research *design "'...provides a framework for the collection and analysis of data...'"* (Bryman & Bell, 2007: 40*).* Since research design, *"' ...will tell readers how you designed your study..."* (Hofstee, 2006; 108), the decisions made with regard to the research design in this study reflect the

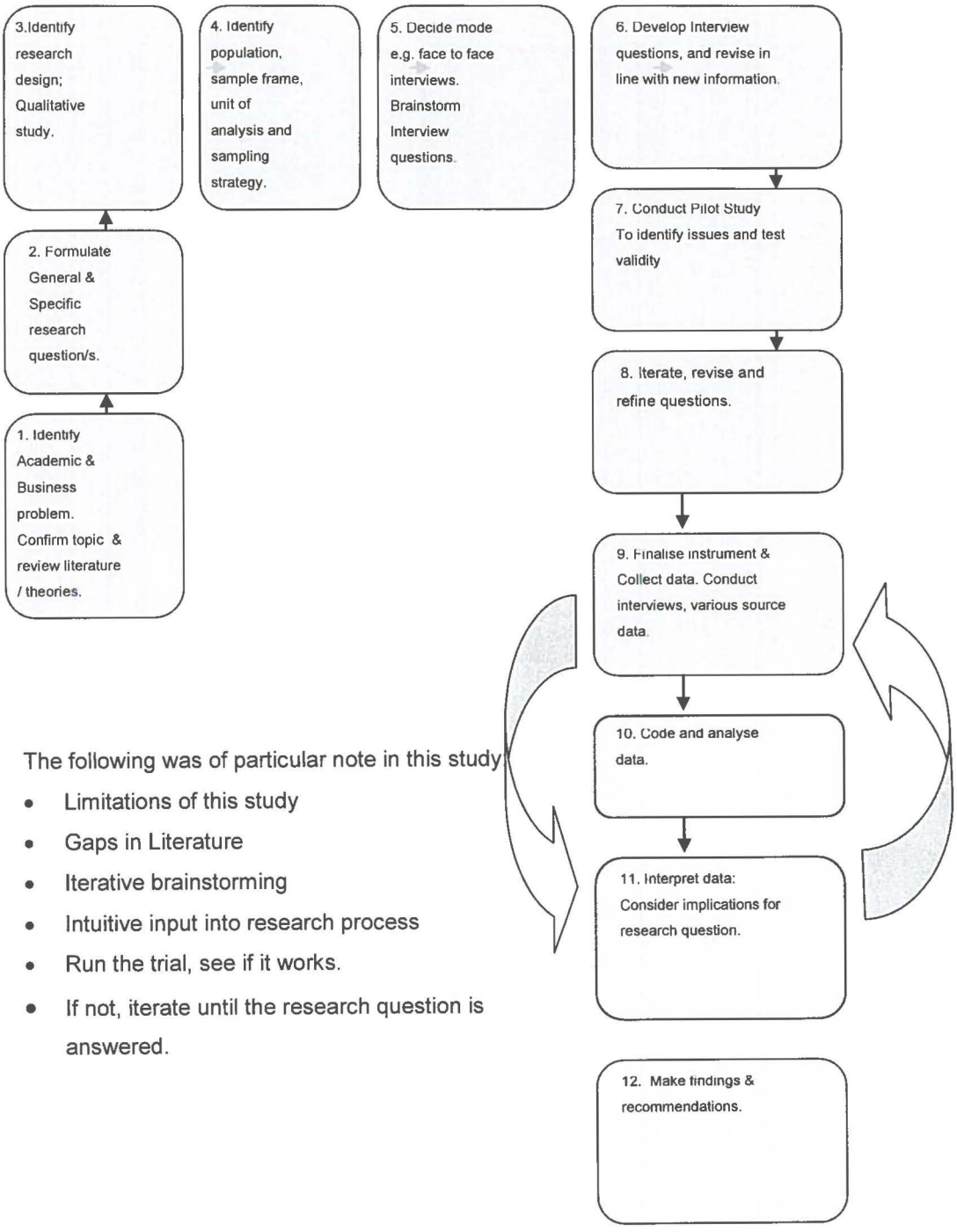
focus on understanding the phenomenon of Intuitive Intelligence within the context of leadership strategic decision making.

Research method means, according to Bryman & Bell (2007: 40), a "'...technique for collecting data. It can involve a specific instrument.'" For example, in this study the main research method involved the use of interviews, observation and third party validation as a means to derive both a definition as well as indicators of Intuitive Intelligence in leadership strategic decision making. Since indicators are used *to "'...tap concepts that are less directly quantifiable.'"* (Bryman & Bell, 2007: 159), these indicators were derived from the following sources:

- Questioning e.g. the respondents' report of their attitude towards Intuitive Intelligence
- Observation
- Documentation and content analysis (Bryman & Bell, 2003)

"'Qualitative research involves an iterative process, whereby the research design, 'tools' and even the research question can evolve as the project unfolds. This allows for the testing of emergent 'hypotheses' or explanations.'" (Barbour, 2008: 31). Since research literature acknowledges that leaders make strategic decisions using intuition (Mintzberg, 2001); the thesis and position adopted in this research study is the following: What is known is that leaders are able to make the right call when making strategic decisions in situations which are ambiguous, which involve risk and without all the information at hand (Agor, 1989). What is not known is *how* they are able to do this. How are they able to draw upon this 'Intuitive Intelligence' to make the right call? The practical and purposive application of the study is ultimately aimed at assisting leaders to make effective strategic decisions. Therefore, this study explores the construct of Intuitive Intelligence; what it is, and what role it may play as a potential effective decision making faculty. How Intuitive Intelligence is used by leaders in strategic decision making; and how it may be distinguished from baseline intuition and its pitfalls (Miller & Ireland, 2005) is the aim and quest of this research study. In keeping with the aim of this chapter, the process shown in Figure 4.1 was useful to

derive the alignment of the research question to a proper research design using extant literature, limitations and gaps of existing studies.



The following was of particular note in this study

- Limitations of this study
- Gaps in Literature
- Iterative brainstorming
- Intuitive input into research process
- Run the trial, see if it works.
- If not, iterate until the research question is answered.

Fig 4.1 Steps taken in the study in terms of the Research Process

Adapted from Bryman & Bell (2007: 181; 406)

4.2 Appropriateness of Research Paradigm

A research paradigm is defined as *the "'...progress of scientific practice based on people's philosophies and assumptions about the world and the nature of knowledge...'"* (Collis & Hussey, 2003:342).

It should be noted that this research study makes use of research questions, rather than hypotheses, although it is possible to formulate them as the latter. Such an effort is deemed unnecessary, as this study seeks to align a suitable paradigm within the context of academic and business research. In terms of the purpose of business research, it is taken as being *"'...part of the business intelligence feedback process. It provides decision makers with data on the effectiveness of current business strategies.'"* (Coldwell & Herbst, 2004: 5).

This research study aims to make a contribution to the business intelligence as well as the decision making component of senior executives. In the context of this study then, the research paradigm determines the outcome of the methodology chosen. From Fig 4.2, two so-called diametrically opposed research mindsets or paradigms are depicted. Interestingly however, Collis & Hussey (2003), portray the Baconian positivistic paradigm versus the phenomenological paradigm - not as two separate entities, but as part of a continuum (Collis & Hussey, 2003: 60).

This research study adopts the 'reality context' best suited thereto as discussed below.

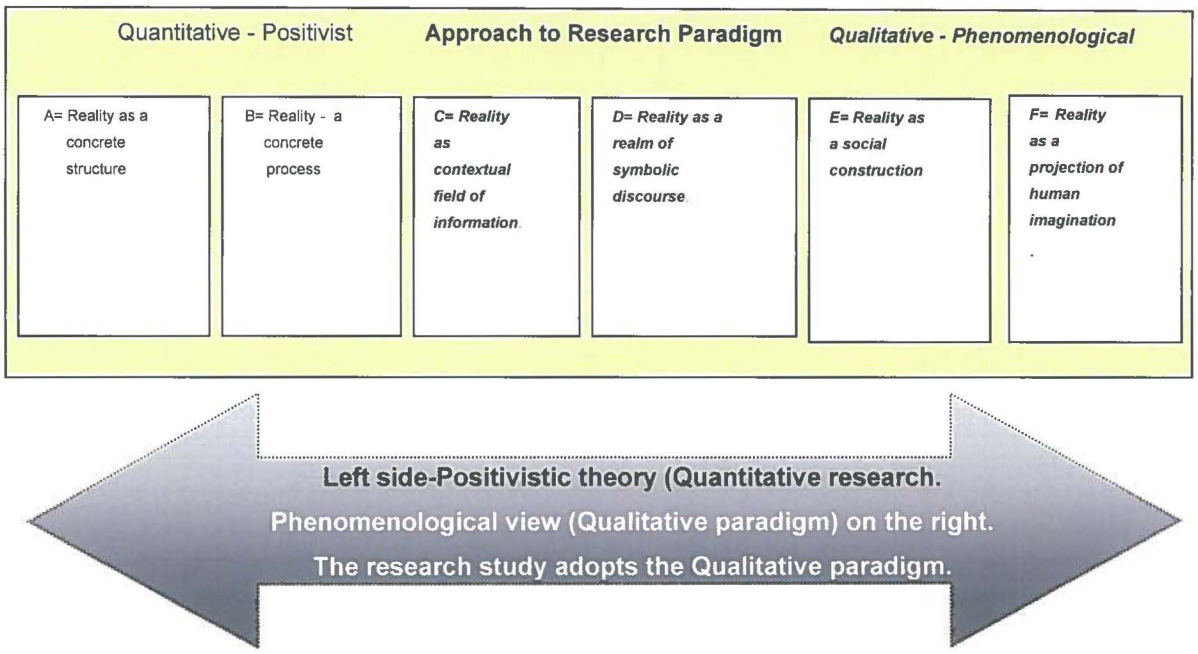


Fig 4.2: Positivistic and Phenomenological Paradigm

Adapted from (Collis & Hussey, 2003: 51).

The continuum as shown in Figure 4.2, moves from a static, absolute (nonhuman), nature of knowledge and reality, towards a dynamic and *human* nature of 'truth'. This places the current research not as an unchanging concrete process but as a "'*...contextual field of information processing to reality as a projection of human imagination.*'" (Collis & Hussey, 2003: 51)

The phenomenon (Intuitive Intelligence) appears to be best located within the continuum along C to F. Whereas C depicts Intuitive Intelligence as a way of contextual information processing (Patton, 2003), it should be noted that its expression may be both pragmatic and craftsman - like in execution.

Kvale (1995) describes the nature of validity expressed through research as:

- Craftsman - like
- communicative, and
- pragmatic

All three principles are followed in this research study, as expressed in Figure 4.2. The continuum depicts the contextual, symbolic and constructivist aspects (blocks C, D, E and F above), which reflect the move towards the interpretive, grounded theory, phenomenological approach. However, the information processing and decision making that the CEO is engaged in, is also shaped by symbolic discursive elements [D]. Meaning is constructed, interpreted and communicated within a social sense making context [E]. Hence the communicative aspect is expressed in terms of the phenomenon.

Intuitive Intelligence may also provide an information input into the human projection of reality [F], (Nonaka, 1988); Ray (2005). This can be seen when the CEO articulates and projects forth the strategic vision or the future 'reality' of the company – the craftsman like manifestation in terms of phenomenon. In fact, Weick (2000) in his sense-making process describes seven processes which flesh out the socialization, contextual aspects depicted in the continuum above. These range from initial identification to plausibility, where conclusions are reached based not so much on accuracy, but on the credible nature of the information source. These further reinforces the move along the continuum toward the social and human, dynamic nature of knowledge. This position is reiterated by Kvale in his article on validity and the social construction thereof (Kvale, 1995).

Grounded theory was used in order to ensure that the phenomenon of Intuitive Intelligence was fleshed out, rich data intact (Corbin and Strauss, 2008). In terms of data richness, the actual interviews with senior executives proved to be the most weighted in terms of evidence, and hence is so accounted for in the analysis, results and discussion section to follow. Based on the literature context, the rooting of intuition in an environmental context of risk and uncertainty and incomplete information (Behling, 1991; Khatri & Ng, 2000; Klein, 2002; Dane & Pratt, 2007) necessitated a context questionnaire being sent to consenting participants to complete. This established a contextually common groundsheet enabling fair comparisons

to be made (Appendix 1). A sampling frame based on proportionate probability sampling was drawn up as a basis for interviewee invites and participation, in order to balance out environmental (external and internal) impacts (Corbin & Strauss, 2008). In terms of levels of sampling; Phase Two also contained purposive sampling in the form of two volunteer participants. Thereafter, theoretical sampling was used, primarily driven from research themes and concepts (Charmaz, 2006). A standard drawing (Jones, 2004) was used at the commencement of each interview process to provide the leader with specified common context (uncertainty, risk, and incomplete information) in terms of strategic decision making. This provided a standard departure point for all participants from which to launch their experience. This would also later be used as the contextual common ground for comparisons (Corbin & Strauss, 2008) with regard to intuitive inputs in strategic decision making.

4.3 Research Criteria

Six SMART criteria were used in setting research objectives. The aim was to ensure that research objectives were:

- Specific (what needs to be done is spelled out).
- Measurable (identified in terms of outcomes).
- Acceptable (is it acceptable and achievable to relevant others).
- Realistic (is it practical, cost effective, quality assured).
- Timeous (does it have time lines for achievement and review).
- Challenging (does it test researcher boundaries, add to body of knowledge, does it consider quality assurance in research).

4.4 Research Concept, Process and Practice

The research process and practice itself will follow VARCS (Validity, Authenticity, Relevance, Credibility, Sufficiency) criteria used for quality assurance of evidence purposes; and also used for the assessment and

moderation of evidence submitted for qualification purposes within the South African Qualifications Authority (SAQA, 2007) under the National Qualifications Framework (NQF). These criteria are listed as follows:

- Validity: known as the "truth" of the research, meant to uncover if Intuitive Intelligence is a construct embedded or grounded in 'reality' as such.
- Authentic: does the evidence reflect an original effort and contribution
- Relevant: Does the research address the objectives identified.
- Credible: Can the evidence / findings be believed?
- Sufficiency: Is there sufficient evidence to justify the findings

Lastly the guideline for business research by Coldwell & Herbst (2004) is relevant and will be adhered to in this research study:

"'Research is important for business in that it reduces uncertainty by providing information that improves the decision making process.'" (Coldwell & Herbst, 2004: 6). The aim of this research study has precisely that purpose in mind. To provide information that improves the decision making process by identifying Intuitive Intelligence inputs in leadership strategic decision making. This research study is founded on the following basic concepts, adapted from Collis & Hussey (2003:56); Bryman & Bell, (2007: 32) and detailed in Table 4.1

Table 4.1 Applicability of Research Concepts

Concept	Meaning in the context of the Research Study	Application / Relevance to study
Theory	A set of explanatory concepts. Inductive (observation / findings leads to theory); Deductive (where theory leads to observation and findings (Bryman & Bell: 2007: 14)	Useful to business researcher. Use of grounded theory involves the iterative approach which links both. The phenomena links to inductive theory, and a qualitative approach. Induction, e.g. where it is observed that leaders can make correct or incorrect *intuitive* decisions, based on the nature of the intuitive input. What is the differentiator in terms of 'calling it right?'

Concept	Meaning in the context of the Research Study	Application / Relevance to study
Research problem	A defined researchable issue.	Validity in the case of a qualitative study is high.
Research design	Refers "'...to a framework for the collection and analysis of data'" Bryman & Bell (2007: 730)	In this study, Quantitative and Qualitative approaches fed into a mixed method design.
Research Method	A specific research 'technique for collecting data' (Bryman & Bell, 2007: 40). In this study, e.g. an interview schedule, and participant observation was used.	Research technique selected needed to satisfy the criteria of good fit with theory and research problem, research question and methodology. E.g. Data triangulation was used (interviews and multiple sources of data)
Qualitative Research	"Qualitative research usually emphasises words rather than quantification in the collection and analysis of data" Bryman & Bell, (2007: 731)	Mixed methods utilised both quantitative and qualitative data.
Research Strategy	Qualitative research strategy used is "'... inductivist, constructivist, and interpretivist'" (Bryman & Bell, 2007: 731) In this research the inductive focus was balanced by a mixed method of triangulation, member validation and multiple sources of data.	In this study mixed methods were used (multi strategy). This describes research that combines 'quantitative and qualitative research methods' (Bryman & Bell, 2007: 728)
Phenomenology	The science or study of phenomena, things as they	An inductive focus was used in the data. An

	are perceived to be, as opposed to the study of the nature of things as they are. This qualitative paradigm is "'..concerned with the question of how individuals make sense of the world around them, and how in particular the researcher should bracket out preconceptions concerning his or her grasp of that world'" (Bryman & Bell, 2007: 730)	understanding of the participants' social reality as derived / constructed from the data. The researcher's voice was clearly demarcated from that of the participant/ [informant]. The phenomenological paradigm was one which was selected as the most appropriate for the portrayal of the phenomena of Intuitive Intelligence.
Research Practice	The main difference between research practice and theory in business research is that the consultant contributes to practice, while the scholar contributes to theory backed by practice (Gummesson, 1991)	This research study aims to contribute to understanding the strategic decision making process of senior executives, with regard to Intuitive Intelligence inputs.
Probability sampling	Proportionate probability sampling is when each unit in the population has a known probability of being selected.	Proportionate probability sampling was used to generate a sampling frame wherein sampling could meaningfully occur.

Adapted from Collis and Hussey, (2003:56); Bryman & Bell, (2007: 32)

4.5 Epistemological Assumptions

In terms of the ontological and epistemological context, this study is rooted in an integrated context. Multiple fields of discipline, expertise and reality contexts contribute to the understanding of the unit of analysis - the decision maker's use of Intuitive Intelligence in strategic decisions. Such multiple fields include Sense making (Weick, 2001), Strategy (Spender, 2005), Strategy as practice, (Jarzabkowski, 2005); Knowledge Management, (Garud, 1997; Ray 2005; Touskas, 2005); Neuro and Cognitive psychology (Simon, 1987).

- Teleology versus Deontology – rooted in deontology in terms of the research study, since the caveat is that the end does not justify the means (Willig and Stainton – Rogers, 2008)
- Participant Contextual Reality – contextually grounded data was collected during direct participant observation and events transpiring during the recorded interview. The researcher formed a qualitative judgement regarding data sufficiency when the description of data reached saturation level, as per personal communication and discussion (Shipham, 2006; Nkomo, 2009; Shipham, 2011).
- A pilot study was conducted to establish validity in various forms. Direct face to face interaction in the form of semi structured interviews was guided through the use of an interview schedule. Interviews were tape recorded, and consent from participants were obtained prior to the interviews. Notes taken during interviews were cross checked for validity against the tape recordings. Interviews were thematically coded and analysed to unveil patterns and trends in order to reveal the nature of the phenomenon.

Specifically, this research is contextualised within the 'epistemology of practice', (Spender, 2005:144); 'managing knowledge', (Spender, 2005: 137), and strategy in practice (Jarzabkowski, 2005).

4.6 Research Assumptions

This study applied the following research assumptions:

- Participant involvement of senior executives of high ranking and seniority, was part of the study on the assumption that intuitive strategic decision making is used among senior executives. (Agor, 1989; Burke & Miller, 1999).
- Intuitive use was *"'...positively associated with organisational performance, in an unstable environment.'"* (Khatri & Ng, 2000:57). Senior executives demonstrated both effective and ineffective intuitive decision making, with the latter showing very little signs of 'Intuitive Intelligence'. No term existed currently except perhaps the coined 'Intuitive Intelligence' which may be said to describe the *conscious* practice of Intuitive Intelligence in everyday life, where such conscious practice was reflective of *"'...consciousness being redefined to comprise both reasoning and imagination.....where what distinguishes the human race is our senses, our ability to reason, and our imagination...'" (Spender, 2005:38).* In this sense, intuition itself is taken as *"'...an unconscious process based on distilled experience.'" (Crossan & Sorrenti, 1997:157),* and where a conscious (intelligent) and evolving intuitive development is explored in effective decision-making. The assumption thus being that Intuitive Intelligence was linked to effective strategic decision-making.

4.6.1 Due Diligence

The following due diligence measures were complied with, in order to assure the quality and integrity of the study.

- Participant criteria for quality research were identified and applied. Such criteria for quality research are listed by Bryman & Bell (2007) as reliability, validity, credibility, dependability, trustworthiness, transferability (generalisability). Compliance with these criteria is discussed further along in the chapter, and any challenges and limitations are explained.
- All of the nine senior executives interviewed, (excluding pilot study), were asked to indicate whether or not they operated in environments of uncertainty and risk. All seven participants from Top 100 companies (from an audited sample frame) and two senior executives, who consented out of interest, indicated that they did, hence a common macro context was established.
- The study only included executives who were able to talk about strategic decisions which were made under conditions of uncertainty and risk. (Miller & Ireland; 2005; Agor, 1989; Sadler-Smith and Shefy, 2007).
- From the Top 100 performing companies (2005 - 2010), only those executives with strategic decision making experience were included in the sample (Agor, 1989; Burke & Miller; 1999).
- A pilot study was conducted separately with one subject matter expert and ratified by one research content expert to enable suitable validity checks.
- Trust was established by consulting with a gatekeeper in the field prior to initiating contact with participants.

In the final study, in-depth, semi structured, face to face interviews were conducted with nine consenting senior executives. The assumption underlying the interviews was that they were meant to provide a valid basis for sharing of deep experiential knowledge and insights not readily available elsewhere. Although random and representative sampling is generally important from a generalisability point of view, it is understood that the qualitative study by nature, carries an inherent bias rooted in the source data (the interviewees). In an effort to minimise bias from self-selection, a

sampling frame was utilised. Only participants' positive responses to the research invitation were used as a basis for inclusion in the study.

4.7 Limitations of the Research Study

The following limitations applied in the study:

- Geographical accessibility. In order to minimise the variable effects of different regions (Khatri & Ng, 2000), Gauteng was used since the researcher was so based and the study proved more feasible from a logistics point of view.
- Use of a Top 100 Companies sample frame to draw from. This limited the number of participants, even whilst strengthening validity and reliability.
- Potential researcher bias was minimised through the use of third party observer inputs to provide alternative frames of reference to the decision maker's modus operandi. However, this created a further limitation, as a result of observer availability, or lack thereof.
- Further potential bias creep was checked via use of systems software to maintain an inherently sound quality process. A focus group was used in Phase One as a further check against bias.
- The study was deeply constrained by the number of consenting, available senior executives. Accessibility was severely restricted due to their seniority and pressurized schedules. The same constraint applied to the third party observer's accessibility.

4.8 Appropriateness Test

The following factors formed part of the consideration and judgements of an 'appropriateness' test, in the choice and structuring of the research design. Such alignment of a proper research design was undertaken by following the three essential guidelines defining a research design; discussed below.

4.8.1 Definition of a Research Design

The definition of a research design according to Cooper & Schindler (1998: 130), is firstly,

"'...a plan for selecting the sources and the types of information used to answer the research question.'" (Cooper & Schindler, 1998: 130).

In this study the main research question [based on the research problem] is: *"Can Intuitive Intelligence be defined, and if so, what role does it play in leadership strategic decision making?"*

Secondly, the research design forms "'...a framework for specifying the relationships among the study's variables...'" (Cooper & Schindler ,1998: 130). In this study, the key variables focused on, are Intuitive Intelligence and effectiveness of leadership strategic decision making.

Thirdly; "'*...it is a blueprint that outlines each procedure from the hypotheses to the analysis of data...*'" (Cooper & Schindler,1998: 130.)

Hence the 'hypothesis' or premise which may be derived from this is that: Intuitive Intelligence assists in effective leadership strategic decision making. The overall driver for a research design is to ensure that the research design is fit for purpose. In terms of the design then, Corbin & Strauss, (2008) profer that if the researcher:

"'...can be content with utilising the multiple perspectives accessed in order to develop a fuller account, then mixing methods can play a valuable role in providing a multifaceted account or explanation of the phenomena we seek to study.'" (Corbin & Strauss, 2008:156)

4.8.2 Alignment with Research Problem and Question

The problem identified in Chapter One was:

'There appears to be no clear definition of Intuitive Intelligence, nor how it is used by business leaders in their decision making'. The following research design was adopted as a result of the nature of the phenomenon, and the process used was the following:

- Reading and re-reading of methodological literature in order to flesh out various methodological combinations that are appropriate to answer the research question at hand:

Can Intuitive Intelligence be identified and what role does it play in leadership strategic decision-making?

The construction of a matrix to establish the appropriateness of design right through to selection is shown in Table 4.2.

Table 4.2 Appropriateness Test

Research Design Criteria	Design	Test of Appropriateness / Inappropriateness	Judgement / Decision
The degree to which the research question is formed is exploratory	Exploratory design	Appropriate	Exploratory – Phase One
Research question is not fully formalised.	Formal	Inappropriate	Not enough is known of the phenomenon to conclude a formal rather than an exploratory approach in terms of the research question.
Research study will yield descriptive indicators of the phenomenon.	Descriptive	Appropriate	Descriptive - Phase Two

Adapted from Cooper & Schindler (1998: 130), Creswell (1994); Bryman & Bell (2007)

Various types of research design were screened on the grounds of appropriateness, and thereafter a deeper level data table was constructed to align research design and actual investigative methods for appropriateness as shown in Table 4.3.

Table 4.3: Appropriateness and alignment of Research Method.

Research Method	Design Paradigm	Key Design & Sampling Strategy	Test of Appropriate-ness	Judgement / Decision
Experimental	Quantitative	Key strategy: Comparison between experimental and control groups with regard to the dependant variable.	Inappropriate – due to experimental focus	Not selected
	Qualitative	Key strategy: Typified by move away from 'test room' methods (Bryman & Bell, 2007: 71) toward qualitative methods.	Inappropriate – due to experimental focus.	Not selected
Cross Sectional	Quantitative	Key strategy: Social survey research done on a sample at a single point in time	Inappropriate	Not selected
	Qualitative	Key strategy: Qualitative interviews or focus groups on a sample at a single point in time. Content analysis of documents on a single event or specific point in time.	Inappropriate – single point in time not feasible	Not selected
Longitudinal	Quantitative	Key strategy: Social survey research on a sample done on extended timelines. Analysis involves different time periods.	Inappropriate - time lines not feasible	Not selected
	Qualitative	Key strategy: Ethnographic research over extended time	Inappropriate - time lines not feasible	Not selected

		lines. Qualitative interviewing on more than one occasion or qualitative content analysis of documents over different time periods. E.g. Pettigrew's study of ICI (mapping change)		
Case Study	Quantitative	Characteristic: Social survey research on a single case with intent to revealing important features about its design.	Inappropriate Multi case level. This study intent is to compare commonalities and differences in senior management strategic decision making [and their use of Intuitive Intelligence] across Top 100 companies	Not selected
	Qualitative	Characteristic : The intensive study by ethnography of qualitative interviewing of a single case, (organisation, or group, or individuals)	Appropriate but on a multi case level	Not selected

Comparative	Quantitative	Social survey typically. Direct comparison between 2 or more cases, includes cross cultural research. Bry-man and Bell (2007: 71)	Inappropriate on a multi case level.	Not selected
	Qualitative	**Ethnographic or qualitative interview where on two or more cases some comparison is sought between them.**	Appropriate : To "generate theoretical insights as a result of contrasting findings uncovered through comparison". Bryman & Bell, (2007: 726)	**Selected with mixed methods**

Adapted from Bryman & Bell, (2007: 71)

The study was thus conducted within the blueprint of the comparative study design, with the use of mixed methods to provide value (Harrigan, 1983; Cassell & Symon, 1994; Lacity & Janson, 1994; Love *et al.,* 2002). Also to 'entertain mixed models' Miles & Huberman, (2002), meant that: *"'Quantitative and qualitative can support each other. Narratives and variable driven analyses need to interpenetrate and inform each other.'"* Miles & Huberman (2002: 396).

The following process enabled due diligence in the proper selection of the appropriate sampling strategy in this study.

4.9 Types of sampling strategy and the selection thereof

Two types of sampling strategy were considered:

- **Probability**
- **Non probability sampling.** Adapted from Bryman & Bell (2007: 185)

4.9.1 Probability Sampling

Simple, systematic, proportionate and multi stage sampling was evaluated.

- Simple random sampling is the most basic form where each unit of the population has an equal chance of being selected. Too random for use.
- Systematic sampling is where units from a sampling frame are selected without resorting to a table of numbers. This was not suitable for use due to limited inherent ordering of the sampling frame.
- Proportionate probability sampling enabled a proportional representation. This was selected for Phase Two as it was the only one which allowed for the resulting sample to be distributed in the same manner as the population in terms of the satisfying criterion (Bryman & Bell, 2007: 18). Thus it offered the means to an accurate sampling frame, for contextual sampling to follow. A further advantage was that it provided a structured means to reduce bias creep by way of an impartial sampling frame.
- Multistage cluster sampling. With cluster sampling the sampling unit is not the units of the population to be sampled but grouping of those units. This was neither applicable nor suitable due to the study requirements.

4.9.2 Non Probability Sampling

Convenience, purposive and quota sampling was evaluated.

- Convenience sampling – where the researcher can simply access the sample as it is fairly readily available. This was not used.
- Purposive sampling – Two purposive participants were included in the study, joining those sampled under proportionate probability sampling in Phase Two.
- Quota sampling – this is often used in commercial research, but selection of people is ultimately left up to the interviewer. This was not used.

The outcome of this process enabled due diligence in the specific generation of research questions and sub questions, by following the process flow in Figure 4.3

Figure 4.3 shows the due diligence and quality assurance process used to map the research question and sub questions and thereafter ensure proper alignment to the instrument questions.

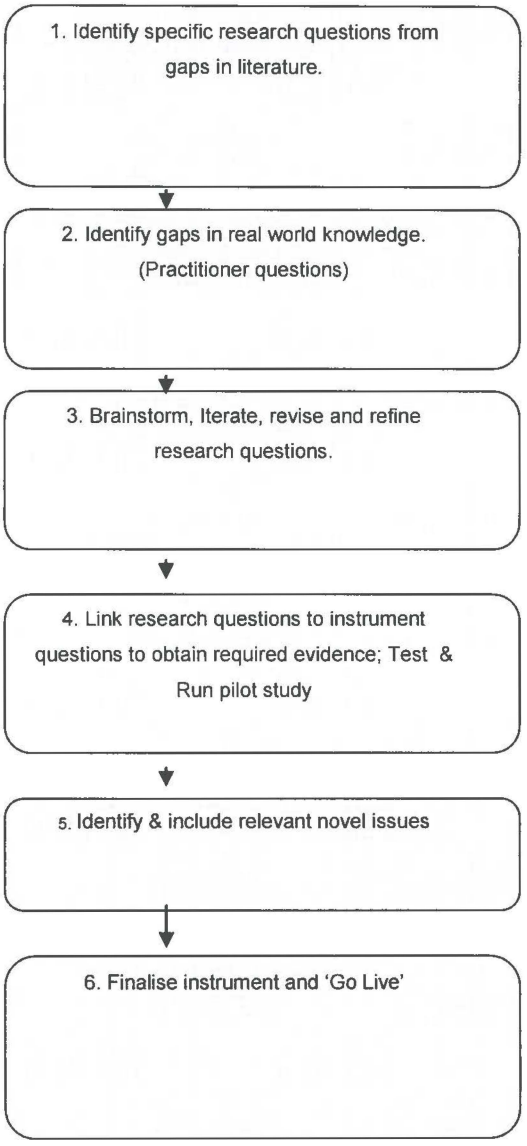


Fig 4.3 Process mapping alignment of research question and sub questions to instrument.

Adapted from Bryman & Bell (2007: 485)

4.10 Research Question

"Can Intuitive Intelligence be defined, and if so, what role does it play in leadership strategic decision making?"

Research Sub questions:

In order to unpack the Intuitive Intelligence [II] construct, the research sub questions were posed as follows:

- Can Intuitive Intelligence be defined? (Based on desk top study, deconstruction of intuition, analysis and findings).
- Can Intuitive Intelligence be empirically verified? (Based on empirical data).
- Can the components of Intuitive Intelligence be identified? (What are its parts and properties? What is it made of?)
- Can the process of *how* leaders use their Intuitive Intelligence during strategic decision making be described?
- Is there a current level of use of Intuitive Intelligence in business leaders?
- Are there characteristics of the 'ideal intuitively intelligent' leader (descriptions of the prototype exemplar)?
- What is the role (if any) of Intuitive Intelligence in leadership strategic decision making.

As mentioned in Chapter One, the research sub questions were aligned to research objectives as research deliverables. For purposes of the final report the research question and sub questions were aligned to the overall research objectives as follows:

4.11 Research Objectives

To define Intuitive Intelligence and its role in leadership strategic decision making.

The research objectives are aligned to the research questions as follows:

1. To define Intuitive Intelligence.

2. To derive an *empirical based* definition of Intuitive Intelligence.

3. To identify the components of Intuitive Intelligence.

4. To describe *how* leaders go about using their Intuitive Intelligence during decision making.

5. To determine if there is a current level of use of Intuitive Intelligence in business leaders?

6. To determine if there are characteristics of the 'ideal intuitively intelligent' leader (descriptions of the prototype exemplar).

7. To identify the role (if any), of Intuitive Intelligence in leadership strategic decision making

4.12 The specific research method, alignment to outcomes; information required.

Table 4.4 shows the application in terms of methodological alignment to the research problem outcomes, and required information. It can be seen that the research is formulated in terms of a dual phase mode of enquiry.

Table 4.4 Alignment of research outcomes with information requirement and mode of inquiry: Phase One and Phase Two.

Phase 1 – Theoretical / Desktop	Mode of Enquiry and Information required	Outcome of Inquiry / Research Insight
Research Problem: What is Intuitive Intelligence? Behling, (1991); Dane and Pratt, (2007).	• Analysis of Extant Literature • Deconstruction of Intuition definitions and conceptualisation. • Extract Criteria of Intelligence from such conceptualisation - Focus Group work	Derive a theoretical definition of Intuitive Intelligence.
Phase 2 - Empirical	Mode of Enquiry	Outcome of Inquiry / Research Insight
Research Problem: What is Intuitive Intelligence? What is the role of Intuitive Intelligence in Leadership Strategic Decision making? Sadler –Smith and Shefy (2007); Burke & Miller, (1999)	• Empirical work on what leaders perceive Intuitive Intelligence to be. -Qualitative (face to face interviews), -Participant observation -CSI inventory -Member checks -Observation -Relevant documentation	-Derive an empirical definition of Intuitive Intelligence - Understand what Intuitive Intelligence is *not.* -Identify the role of Intuitive Intelligence in Leadership Strategic Decision making.

Conclusion: The dual phased methodology used in the study is fully aligned to address the research question. Table 4.5 shows a corresponding alignment of the research question and sub questions to the data analysis process.

Table 4.5 Alignment of research questions to data analysis.

Research Question	Sub questions	Based On	Analysis of Results
'*What is Intuitive Intelligence? Theoretical* **(Phase One)**	Define Intuitive Intelligence.	Literature review Database search	• Desktop Deconstruction of Literature • Criteria of Intelligence • Focus Group • Construct formation
Definition of Intuitive Intelligence? (**Phase Two)**	Derive an *empirical based* definition of Intuitive Intelligence Subquestion: *How do leaders go about making strategic decisions using an intuitive input.*	Based on research problem, extant literature, adapted research questions) Sadler - Smith and Shefy (2004)	• Empirical focus on what and how leaders perceive their intuitive decision making. • Coding and analysis of data, comparison to criteria of intelligence.

What role does Intuitive Intelligence play in leadership decision making?	*What role does this intuitive input play in senior executive function?* Is there conceptual alignment in terms of intelligence criteria?	Interviews – face to face –access of point of source information Questionnaires Interviews CSI Inventory	• Obtain an empirical basis for interpretation by use of a suitable valid, reliable existing instrument e.g. CSI • Qualitative probing 'point of source' valid, authentic data. Face to face interviews with senior executives

Adapted from Marshall (2009); (Personal communication: August 2009)

4.13 Phase One

In Phase One, the unit of analysis is [II]. A deconstruction of intuition as a base construct of [II] is followed by a comparative analysis of concepts congruent with intelligence literature. The objective of Phase One is the construction of a theoretical definition of [II].

The Phase 1 approach involved desktop literature reviews (secondary data analyses), as well as searches from at least two electronic databases. A deconstruction of the literature was undertaken to establish the unit of analysis; a working definition of Intuitive Intelligence. Key terms were ordered into concepts and thereafter compared to the criteria of Intuitive Intelligence.

Table 4.6 explicates the conceptual groundwork underlying this approach.

Table 4.6 Phase One Approach

Research Question: What is Intuitive intelligence, and what role does it play in Leadership Strategic Decision making?	
Researcher Context	**Justification**
Researcher belief:	No clear definition of the construct. Importance of context in decision making There is no objective reality to measure. Points to a qualitative approach.
Research question	Open, interpretive of how decision making may or may not employ intuitive intelligence. The research is not predictive in nature.
Available literature	Not an abundance of literature available. Limited empirical studies done.
Research focus	This is an in-depth study typical of a Qualitative method.
Ability / desire to work with people	High people focus. Research acknowledges the fact that [II] (displayed in decision making) resides in humans (senior executives in this case). The senior executive decision maker using intuitive intelligence in strategic decisions is the primary unit of analysis in this study.
Researcher competency / skills set	Registered Assessor, Moderator, Occupational trainer; Regional manager. MBA graduate.

4.13.1 Justification - Why Phase One

Although references are made to Intuitive Intelligence with respect to intuition, the extant literature ventures no definition of Intuitive Intelligence. In fact, the difficulty around agreement in definition of intuition itself has been highlighted in the work of Behling, (1991). Phase One was designed to highlight if the construct intuition showed evidence of:

-Real world application in the field,

-Matching existing criteria of intelligence

4.13.2 Discussion of Design – Phase One

To ensure rigor in the research process, the following was included in Phase One. It should be noted that the process was based on a previously used [and validated] method by Behling (1991), hence ensuring that reliability stayed inherent in the process:

- Unit of Analysis: Definition of Intuitive Intelligence or [II] - derived from English publications.
- Population - Total 108 definitions / 45 English publications to date
- All English publications from 1976 -1987 [24 books and articles / 87 definitions of intuition (Behling, 1991)]
- Additional 21 books and articles – relevant academic publications.
- Sample equalled the population – to ensure reliability of the secondary data analysis.
- Scope – only English publications were included in the study.

Phase One of this research study used only published extant English literature applicable to the research topic. Thereafter, deconstruction of research literature in terms of key terms was undertaken. This process was also automated in order to aid reliability. Accepted descriptive statistical measures were used to display patterns or theme trends.

The limitations of the study as a result of potential researcher bias was mitigated through the use of an independent, external focus group as discussed in Phase One.

4.14 Phase Two

In Phase Two, the study is taken to the field. The unit of analysis, defined by Welman & Kruger (1999:50) is "'...the members or elements of the population'". In this research study, the unit of analysis is the senior executive as strategic decision maker. *How* the leader makes the strategic decision drawing on [II] will be revealed at this level of unit analysis. The secondary level unit of analysis is the strategic decision itself and the analysis of the intuitive input therein.

4.14.1 Justification Phase Two

The justification for Phase Two was to obtain rich data from the point of source – senior executives. The overarching approach consistent with theoretical sampling and grounded theory (Corbin & Strauss, 2008; Charmaz, 2006) was used to determine sufficiency of nine interviews with senior executives and one pilot study with a subject matter expert. The criteria of theoretical saturation was used as a compliance measure to establish sufficiency of evidence.

4.14.2 Discussion Phase Two

In this section of the study, the following considerations in relation to population, sample, sampling frame, scope and limitations; are discussed:

- Population: Senior executives, listed on the published Top 100 Companies list over the past 5 years, with 10 years industry experience, and a minimum of 5 years company specific experience. Numbers matching that population profile is estimated to be approximately 100 senior executives.
- Sample: Eight to Ten senior executives listed on Top 100 companies list were proposed in the initial study. In reality, nine senior executives were interviewed; seven from the Top 100 companies list and two from separate leading companies who participated from a voluntary interest point of view. Only senior executives in leadership positions who had

more than ten years working experience in the industry, and five years company experience, were admitted to the study.

- Levels of Sampling: Proportionate probability sampling was used at the outset to balance out environmental (external and internal) impacts (Corbin & Strauss, 2008). Purposive sampling was used for two Phase Two participants. Theoretical sampling, was used primarily as a knowledge hunt tool, fuelled by the data obtained, the research themes emerging, linked questions and concepts.
- Sampling was done within the parameters defined in the sampling frame, as the "'*...most important kind of non probability sampling where researchers obtain units of analysis in such a manner that the sample they obtain may be regarded as being representative of the relevant population...*'" (Welman & Kruger, 1999: 63). By representativeness is meant that the "'*...sample has the exact same properties in the same proportions as the population from which it was drawn, but in smaller numbers...*" (Welman & Kruger, 1999: 49; 2005)
- Sampling frame: Is defined as "'*...a complete list on which each unit of analysis is listed only once...*'" (Welman & Kruger, 1999: 49). This list was drawn from Top 100 companies (2005-2010).
- Scope: The study did not look at Intuitive Intelligence used in non strategic decisions, or in daily life (Behling, 1991; Ashford & Anand, 2003), but tried to define what the role of [II] is in leaders' strategic decision making.
- Limitations: The study was cognisant of the following in relation to limitations.

- Time constraints: Senior executives were largely not in control of their time.
- Non responses from participants
- Participant availability and accessibility issue
- Schedule Interruptions / disruptions (strikes/crisis)
- Availability of artefacts accessible to the researcher.
- Ability to transform interview to depth required within timeframe
- Bias in sample (interest driven)

4.15 Overall Due Diligence – Phase One and Two

The following process was used to ensure research rigor in Phase Two.

- Use of standard related criteria of intelligence from credible, published literature sources.
- Process of construction of Intuitive Intelligence definition.
- Cross matching of key terms to intelligence criteria to check for alignment.
- Focus group – external criteria verification. External third party was present during focus group session.
- Testing of key terms and concepts by means of Pilot study.
- Recording and transcribing of interviews.
- Transcripts sent to participants for checking.
- Use of triangulation as a means to ensure quality data.
- Use of qualitative software in data analysis.

4.16 Triangulation defined

Rice & Ezzy (2002: 38) define triangulation as: *"'Triangulation, or the use of multiple methods, involves using a combination of methods, researchers, data sources and theories in a research project.'"* Rice & Ezzy (2002: 38) Triangulation increases the quality of research by using *"'...different research approaches, methods and techniques in the same study...'"* (Collis & Hussey, 2003: 78). The research study thus contributes to the fuller and richer picture of firstly, what Intuitive Intelligence is (Phase One and part of Phase Two), and thereafter how it plays out in leadership strategic decision making (Phase Two).

Denzin (1994), cited in Collis & Hussey (2003: 78) supports methodological triangulation (both quantitative and qualitative data) leading to *"'...greater validity and reliability...'"*

4.16.1 Types of Triangulation

Four 'distinct types', Rice & Ezzy (2002: 38) are identified:

- Data source triangulation is where multiple data sources are used. For example, in this research study, interviews, relevant company documents and information sources were used (Love, 2002).
- Methods triangulation is where multiple research methodologies are used. Hybrid methodologies (Harrigan, 1983) were applied in the study; for example in-depth interviews, document analysis and participant observation.
- Researcher triangulation involves other researchers being included to provide feedback and perspective. In this study subject matter experts were invited as third party auditors to vet the methodology upfront and to verify the choices made and the decisions taken.
- Triangulation involves the "...drawing on multiple theoretical perspectives to provide new insights..." Rice & Ezzy (2002: 38)

4.17 Research Instruments

Notwithstanding the previous efforts described in the search for proper investigative alignment; the efforts to ensure research rigor in relation to research instruments included the following considerations:

4.17.1 Reliability

Denscombe (2010) and Coldwell & Herbst (2004) discuss reliability in terms of the "'...*hallmark*... '" of consistency, (Coldwell & Herbst, 2004: 17); and the "'...*credibility of the findings*...'" (Collis & Hussey, 2003: 58). Reliability also fulfils three functions as Gummesson, (1991: 80), puts it:

"(1) a police function: Curb dishonest research and nail the villains!

(2) An intelligence test: Are the scientists clever or stupid and is their reasoning logical?

(3) A substitute for validity when validity seems to be beyond reach; reliability then plays a part of a "validity crutch". The researcher establishes reliability and assumes validity."

4.17.2 Validity – Phase One and Phase Two

Gummesson (1991) defines validity graphically when he says:

"Validity means in essence that a theory, model, concept, or category describes reality with a good fit, just like a good map properly describes Earth, or an architect's blueprint is useful for erecting a functioning building. If the map did not reflect the terrain, most people would abandon the map. Scientific training, however, all too often seems to blind a person to nature and the scientist may give up the terrain rather than the map." Gummesson, (1991: 81)

Qualitative research and the grounded theory approach, in particular guards against this blind spot by being open to new theory generation as opposed to theory testing. The position adopted in this research study is toward the receptivity of data and inclination toward theory generation. Hence *"'...the attempt to find new ways of approaching reality...'"* and *"'...the need to be creative and receptive in order to improve one's understanding...'"* Gummesson, (1991: 83) are adhered to.

There is a contrast then in terms of this research intent, and between mainstream research which is preoccupied with the testing and refinement of existing theories and models, and (in this study), the generation of theory (Gummesson, 1991; Coldwell & Herbst, 2004); where research instruments facilitated the generation of theory.

Internal validity is defined as the extent to which the hypothesis (research question in this case) is *"'...supported by the available evidence...'"* (Coldwell & Herbst, 2004:17). In this study senior executives related their narratives and their effective strategic decisions were recorded and analysed. As they consented to participate in the research study, (and consented to having their decision making open to third party scrutiny), the aim of presenting a balanced version of both negative and positive versions of the [II] story, was deemed to be a suitable indicator of validity.

External validity refers to the capacity to generalise findings to other similar situations and contexts. Table 4.7 explicates how these tests were met.

Table: 4.7 Validity, Reliability and Relevance checks

Table of Reliability and Validity	
Phase One – How ensured	**Phase Two –How ensured**
Internal validity	
- Deconstruction of key terms.	-Pilot study -Construct formation using standard criteria.
-Only published articles used	-Do multiple coding -Do coding checks -Third party reviews - Addressing of rival explanations -Face validity by use of questions adapted from Sadler-Smith & Shefy (2004) -Qualitative analysis
External Validity	
Published definitions of intuition	-Senior executives from Top 100 companies. -Only strategic decisions explored
Published criteria of intelligence used	Criteria applied to research
Construct validity	
-Probed in the construct formation of Intuitive Intelligence. Selection criteria checks are cross matched to standard existing intelligence criteria.	-Use of pilot studies. 1x Pilot study done with content expert. Content validity check.
Relevance	
-Available extant literature (English)	Relevance of construct explored in real

was perused for academic and real world relevance. Clear conceptualisation of intuition obtained as a base construct of Intuitive Intelligence. Definitions of intuition were grouped and organised according to key features of the construct. These key features were checked for recurrence (consistency check), and then cross matched to standard criteria of intelligence. Matching key features were thereafter carried forward into the construct formation of Intuitive Intelligence. This theoretical construct formation was then compared to empirical research findings	world practitioner context. Checking of relevance with senior executives: Do they use intuitive inputs in strategic decision making? Does it play a role for them? Is it a differentiator in terms of performance for them?
Reliability	
Descriptive stats and explicit data display	Qualitative protocols adhered to in the following manner: External focus group acted as verification 3rd Party presence throughout focus group process. Use of standard existing instrument such as the CSI (Cognitive Style Inventory)-Interview Schedule - uses existing recommended and adapted questions -Triangulation to method to increase validity and reliability

	-Taped interview -Transcript checked vs. notes -Transcript checked with senior executive -Audit Trails

Adapted from Coldwell & Herbst (2004:17); Bryman & Bell, (2007)

From the compliance of test criteria to the adherence of a standardised process flow in order to enable the levels of validity in terms of instruments utilised and evidence required; as shown by Fig. 4.4.

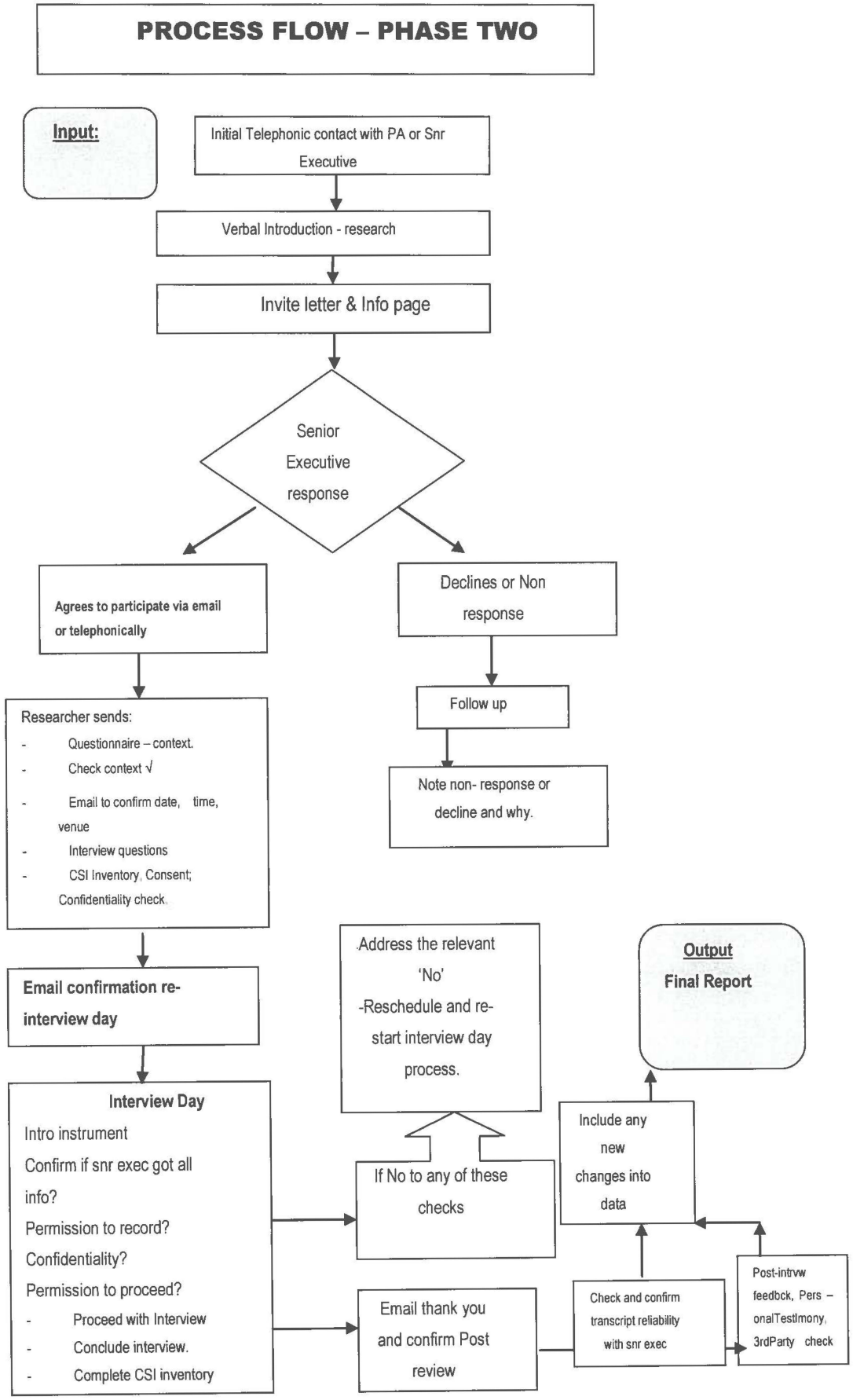


Fig 4.4: Flow chart of the due diligence process followed - Phase 2

In order to obtain a comprehensive picture of all aspects under scrutiny, data collection methods included an in depth semi-structured interview guide for the interview process. A cover letter explaining the study objectives was sent to potential participants by means of email. Upon receipt of the participants' consent, a face to face interview was set up. A semi structured interview using the questions on an interview protocol was used. The interview was tape recorded with the participants' acceptance, for ethical clearance. Recorded tapes were cross checked against interviewer notes to serve as a validity check. Data was thematically coded, analysed and findings reported.

4.18 Pilot Study – Phase Two

A pilot study was conducted with an available subject matter expert (from business), and was vetted by an expert in research, to test for face validity, before the launch. Any changes required were made to the interview protocol as a result of inputs from the pilot study. This served to tighten up on the face validity of the instrument.

4.19 How interviews were checked for effectiveness

It was essential that proper interviewing techniques were followed to obtain a grasp on the phenomenon. The following guidelines for effective interviewing were followed.

4.19.1 Interview choice and how to conduct interviews effectively

The choice for the type of interview was made by using the following guidelines offered by Bryman & Bell (2007).

- In semi structured interviews, an interview guide is followed, but this was not a rigid following of a schedule as in the case of a structured interview.

- Semi structured interviews were selected rather than unstructured due a clear focus on the phenomenon, and not a vague *"'notion on a research area.'"* (Bryman & Bell, 2007: 477).

- Focus on the specific issues of the phenomenon – what it is, how leaders draw upon it in making their strategic decisions.

- In using multiple cases, semi-structured interviews also offered the flexibility as well as a cross–case comparability advantage.

- Consideration of how essential proper interviewing techniques were to obtain a grasp on the phenomenon. Thus the study adhered to the following guidelines for effective interviewing.

4.19.2 Guidelines for proper interviewing

The following five guidelines are adapted from Bryman & Bell (2007: 483) and were largely followed in this study:

- Sort the order of the questions so that the questions flow, but be prepared to change the order if necessary. Take cues from the participant.
- Try to create interview questions such that they are not prescriptive, but also so that the research question is ultimately answered e.g. what is Intuitive Intelligence, what role does it play in leadership strategic decision making.
- Use language (given the seniority of interviewees) participants can relate to. Take the context into consideration (this was of critical importance in the study).
- Avoid leading questions. Take your cue from the responses, and probe on.
- Record demographic information both general (age, gender, and other) and specific (position in company, number of years employed in company; in industry). This also provides for contextual understanding.

4.19.3 Tenets for a successful interview

The twelve tenets for a successful interview was adhered to, in order to ensure that the required evidence is obtained. Adapted from Bryman & Bell (2007: 484).

1. Know the subject / interview topic, and use pilot interviews to ensure that the proper focus is achieved

2. Structure the interview to achieve the depth and focus required. Introduce the objective/s. Check whether the interviewee has questions before wrapping up the interview.

3. Be clear with the questions. Ask simple, easy short questions.

4. Be respectful and gentle by letting people finish, give them time to think and reflect on the question/s.

5. Listen, really listen to the interviewee. Be sensitive to underlying sub-text present, pick up on it, and probe if need be.

6. Be flexible and open, and be prepared to shift direction - use the grounded theory approach to guide the interview.

7. Steer the interview in the direction you need in order to obtain the insight required to answer the research question.

8. Be on the lookout for inconsistencies, and address them in the interview.

9. Remember what is being said during the course of the interview and be prepared to link this to what the interviewee said previously.

10. Clarify meaning at point of source, but do not impose the researcher meaning onto the interviewee's statements.

11. Balance the interview by not talking "too much" or "too little," Bryman & Bell (2007: 484)

12. Be ethically sensitive to the aspects of interviewing, and ensure that the interviewee knows that the interview is confidential.

4.20 Code of Conduct and Bias

A strict code of conduct was followed during the course of this research study (Sellitz, Jahoda & Cook; 1965). Guidelines from Denzin & Lincoln, (1994) on interviewer bias were useful, e.g. influence on the answers due to tone. Given the above cautionary note, this research sought to minimise interferences by the systematic use of a semi-structured in-depth interview guide (included in Appendix 2).

4.21 Observation Technique

Participant observation was used in a flexible form. This relied on the experience of the researcher (background in social psychology; trainer / facilitator and registered Assessor and Moderator). Careful notes as an observation guideline was used. (Walitzer & Wiener, 1978; Leedy & Ormrod, 2005:145) The left side of the page was used for observation, and the right margin for researcher's reflection, notes and interpretations. Notes were divided into the following:

- Direct observation (Body language, behavioural cues, eye movements and facial expressions)
- Inference (what the researcher thinks)
- Analytical (Codes, Categories, Themes, Ideas)

4.22 Data Analysis

Phase One

Secondary data analysis is defined as "'*...studies made by others for their own purposes.*'" (Cooper & Schindler,1998; 78), and was used in Phase One. The approach is supported by Marshall & Rossman, (1989); Denzin & Lincoln, (1994:78). Furthermore, according to Cooper & Schindler, (1998:78): proper data analysis "'*...involves reducing accumulated data into a manageable size, developing summaries, looking for patterns, and applying statistical techniques.*'"

Secondary data analysis was used in Phase One to aid in the search towards a theoretical conceptualisation of the construct [II] from the base construct intuition. Notwithstanding the various benefits of the method, such as a "'*...fuller use of the data...*'", (Bryman & Bell, 2007: 334), secondary data analysis has its limitations, such as:

The researcher's lack of familiarity with the data. This has been tackled in the research study by additional time being allocated towards understanding the various categories and coding used in the data sets. (Bryman & Bell, 2007: 334).

- Complexity of data in large data sets presents problems with data management which needs the researcher to allow for a "'*...period of acclimatisation.*'" (Bryman & Bell, 2007: 334). The large numbers of respondents and variables may not indicate the levels at which the data is collected, and presented. In this research study, this limitation has been minimised by the use of the secondary data from individual responses, and the use of computer software to minimise the data management issues.
- Absence of potential key variables and lack of control over data quality are also limitations which the research study had to consider. These were mitigated by an iterative approach to the literature which yielded other key variables on reinterpretation. Having said this it was still difficult to engage in a meta-analysis of the data with "'*...totally unambiguous interpretations...*'" a point succinctly made by Bryman & Bell (2007: 336).

Phase Two

The data obtained from the in-depth interview guide [Phase Two] was analysed using descriptive statistics, (Pedhazur & Schmelkin, 1991; Haslam & McGarthy, 2003); and ethnographic analysis was done with cognisance taken of themes identified in the literature along the lines of thematic and ethnographic content analysis.

Content Analysis may be defined as: an approach to the analysis of documents which seeks to analyse documents using predetermined categories in "'*...a systematic and replicable manner.*" (Bryan & Bell 2007: 304). Ethnographic analysis also refers to qualitative content analysis (Bryman & Bell, (2007) as "'*an approach to the analysis of documents that recognises the interpreter in the construction of meaning, and which allows categories to emerge from the data..*'" (Bryman & Bell, 2007: 304).

4.23 Process involved in Phase One and Two

Comparisons were made between the notes taken during the interview, and the tape recording transcripts. In this way, data was screened for validity; given a multi-dimensional layering. In keeping with the phenomenological paradigm, data analysis in this research study acknowledges the following:

- The analysis is subjective, constructivist, and aligned with the phenomenological paradigm.
- The main thrust of data analysis is thematic analysis, category and content analysis in keeping with the Qualitative paradigm (Guba & Lincoln, 1985; Leedy & Omrod, 2005).

4.24 Problems in data analysis and the overcoming thereof

Since the outcome of data analysis in this study is to identify the Intuitive Intelligence phenomenon within the strategic decision making context, potential problems relating to data analysis were overcome by:

- Use of codes to summarise.
- Using theoretical literature broad guidelines as a context for the new emerging pattern trends.
- Displaying data graphically through graphs, tables.
- Searching constantly for recurrent behaviour, key words, themes, patterns.
- Identifying discrepancies that occur and trying to account for them.

4.25 Coding and Construct interpretation

Qualitative research software was used to automate the coding process, to instil and increase an inherent quality in the process. In this way, manual errors were reduced and trustworthiness of the process was preserved.
As far as types of coding used, these were open coding, in - vivo and axial coding.

Any reference links or divergence to the key codes from literature concepts was also noted in guiding the conceptual framework. After coding into key words, themes and patterns, new emerging concepts were documented. This formed part of further theoretical development.

4.26 Display of data

Matrices of data were displayed where missing data from rows and columns were highlighted. Similarities and differences were displayed. Deliberate comparison lead to new themes.

4.27 Best Practice

In terms of due diligence, additional criteria for evaluating qualitative research were applied in the study. These were as follows:
Credibility, Transferability, Dependability, Confirmability, Authenticity.

Credibility: According to Bryman & Bell (2007; 411), credibility '"*...parallels internal validity*"' and means that best practice has been followed. The researcher may also submit the report of interview transcripts (or findings) to others (sent to participants in the case of the study); to confirm that the researcher has understood the participant's world (respondent or member validation)

Transferability: Transferability which Bryman & Bell (2007), suggest parallels external validity. This shows the extent to which the findings may be transferred to another social context or the same context at another time. (Lincoln & Guba, 1985).

Dependability: Dependability parallels reliability Bryman & Bell (2007: 411) As a criterion of quality research (trustworthiness) researchers should adopt the 'audit' type mindset. An audit trail was kept of the research decisions made. Bryman & Bell (2007). However, this is not a popular method due to the large data sets which arise from qualitative research.

Confirmability: Confirmability parallels objectivity Bryman & Bell (2007), as a demonstration of good faith, which means that good conduct in undertaking the research (and generating findings therefrom), needs to be evident. While total objectivity is extremely difficult in qualitative research, confirmability implies that the researcher took steps to be free of the agendas and biases which compromise quality research (Keating,

Fernandez, Jacobs, & Kauffmann, 2001). A probability based sample frame was used in this study.

Authenticity: Fairness - in other words does the research represent the *"...different viewpoints among members of a social setting?"* Bryman & Bell (2007: 414).

- Educative authenticity - Does the research highlight other members' perspectives of their social reality. This was highlighted in this study by the third party / observer evaluation (Appendix 5)
- Catalytic authenticity - Means that the members have been promoted by the research to act on their reality.
- Tactical Authenticity – means that the research has somehow empowered members to action. (Perhaps to improve their current situation?).
- Ontological authenticity means that the research helped members of that social reality context understand the construct better. In this study, this was demonstrated by the post interview session, and the personal testimony of participants (Appendices 5-6).

Bryman & Bell (2007: 415) argue that various positions may be adopted by researchers e.g. the realist position, where there is little adaptation to the criteria of reliability and validity Seale (1999), Harrigan, (1983); Hancock & Algozzine, (2006); as showing the reconstruction of the social world of its members. Such *'truth claims'* (Bryman & Bell, 2007: 415) always need to be judged on plausibility and credibility. Of importance is that due diligence be practiced, and that evidence is submitted for scrutiny, e.g. audit checks as conducted in this study, in order to adhere to the tenets of quality research.

4.28 Theoretical Saturation

The guidelines by Nkomo, (2007), and Corbin & Strauss (2008) involving theoretical saturation was used. Theoretical saturation meant that an added level of vigilance and awareness was required:

"Staying 'self aware' shows how important it is to maintain a part of attention on the processes involved in analysis, from the selection of

research questions through coding, the creation of displays, data entry, conclusion drawing and verification. Only through such sustained awareness can regular self correction occur - not just during specific analysis episodes, but over time, as the methods themselves iterate and develop." (Miles & Huberman, 2002: 397).

4.29 Ethical Issues

The Ethical Checklist in Table 4.8 shows the ethical considerations involved in the study.

Table 4.8 Ethical Checklist

- Will the research process harm participants or those about whom the information is gathered? [NO – desktop research – Phase One]
- Are findings of this research likely to cause harm to others not involved in the research? [NO – theoretical construct framework]
- Any violation of accepted research practice in conducting the research and data analysis, and drawing conclusions? [NO - All research methodology is vetted for reliability and validity, authenticity]
- Any violation of community standards of conduct? [NO – theoretical focus – Phase One; empirical focus – Phase Two.

Adapted from Collis and Hussey (2003: 39)

4.30 Summary

Chapter Four explicated the processes and guidelines followed in order to collect and analyse quality evidence. In order to minimise problems and keep the credibility and trustworthiness of the data analysis process intact, the researcher followed the guidelines and steps outlined by Cooper & Schindler (1998); Bryman & Bell (2007); among others referenced. In the systematic but flexible approach taken, reflective insights are still given room to surface, while generalisability of findings is grounded within empirical roots. This research thus supports a Qualitative paradigm focus in answering the 'what' and 'how' of Intuitive Intelligence in strategic decision making. Since due regard is given to the fact that the phenomenon studied in this research project is human and dynamic, the move toward the phenomenological (interpretivist) side is reinforced by use of methodologies from Grounded theory and Ethnography (Charmaz, 2006; Corbin & Strauss, 2008). Chapter Five examines the study data, analysis, results and discussion thereof.

CHAPTER FIVE

DATA ANALYSIS, RESULTS AND DISCUSSION

5.1 Introduction

This chapter examines the data and ensuing analysis as well as the primary narrative and discussion derived therefrom (Elliot, 2006; Ellet, 2007; Dul & Hak, 2008). As the mandate of this study was to understand and explicate the phenomenon of Intuitive Intelligence, data was sourced from multiple sources, highlighting codes, themes, categories and concepts in terms of grounded theory (Willig & Stainton-Rogers, 2008; Corbin & Strauss, 2008; Charmaz, 2006).

5.2 Process used in Data analysis

The process of coding using qualitative software, meant that the transcripts were trawled for exploratory codes from the multiple data sources. Thereafter, key words and core concepts were analysed in the data analysis process. Software was used to increase the reliability and trustworthiness of the process. Theoretical saturation entailed multiple code usage. Open coding was followed for example, by axial coding to look for congruence and or dissonance in terms of the process of intuitive development. For example, the four phases of intuitive development indicated by Mintzberg (2001); that of preparation, incubation, Illumination, and verification, were used as beacons in the coding labyrinth. Fig 5.1 illustrates the process used to obtain scientifically robust interpretive data. (Corbin & Strauss, 2008)

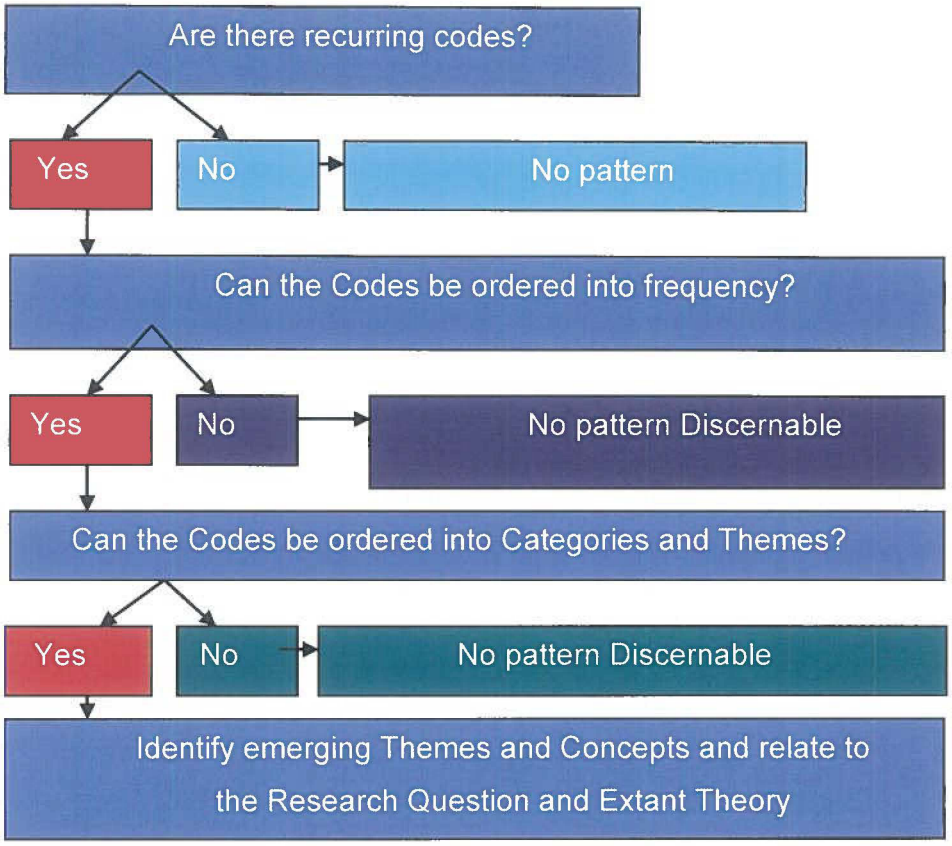


Fig 5.1: Illustrates the process followed in the study in relation to data analysis and interpretation

5.2.1 Multiple Data Sources

Multiple data sources were used to deliver on the objectives of the research study (Lacity, 1994). These data sources were as follows:

- Focus Group
- Context Questionnaire
- Observations
- Interviews
- CSI Inventory
- Post Interview Session
- 3rd Party Input
- Personal Testimony (from participants)

5.2.2 Theoretical Saturation

The guidelines involving theoretical saturation were imparted in personal communication between the author and Nkomo in 2007; and thereafter in 2009. The level of regard for such a process also called for calibrative vigilance from the researcher in terms of when to halt the data collection - a process bound inherently by the data itself. This approach is supported by Miles & Huberman, (2002); Corbin & Strauss, (2008); and Barbour, (2008).

5.3 Display of data

How data is displayed is shown according to the guidelines below (Elliot, 2006; Denscombe, 2010)

-Matrices of data are displayed where missing data can be identified and addressed as far as possible.

-Similarities and differences are displayed, for comparative analysis.

- Data is displayed by data source

In Table 5.1 below, five participants formed part of the focus group.

Table 5.1 Data Source and any Missing Data – Phase One

Serial No	Focus Group	Deconstruction of Definition of Intuition
1	5 participants	√

In Table 5.2 to follow, sources of data are explicated, and any missing data is duly indicated.

Table 5.2 Data Sources used, and Missing Data – Phase Two

Serial No.	Participant No.	Participant Context	Questionnaire Context	Interviews	Observations	CSI Inventory	Post Interview Session	3rd Party	Personal Testimony
	Min 5 yrs company experience; Min 10 yrs industry experience.								
1	Participant 1 (hereinafter referred to as Purposive 1)	Snr Exec (SE)-Basic Materials/ Resources Mining	√	√	√	√	√	√	√
2	Participant 2 - hereinafter referred to as Purposive 2	Snr Exec-Industrials – Construction	√	√	√	√	√	√	√
3	Participant 1 from the Top 100 Companies sample – hereinafter referred to as P1.	SE.-Industrials-Engineering	√	√	√	√	√	√	√
4	P2 – Top 100 Companies sample – hereinafter referred to as P2.	CEO-Consumer Services – Retail	√	√	√	√	√	√	√
5	P3 –Top 100 Companies sample – hereinafter referred to as P3.	CEO- Basic Materials – Resources Mining	√	√	√	√	x	x	√
6	P4–Top 100 Companies sample – hereinafter referred to as P4.	CEO- Basic Materials – Resources Mining	√	√	√	√	√	√	√

7	P5–Top 100 Companies sample – hereinafter referred to as P5	SE-Health Care	√	√	√	√	x	x	√
8	P6–Top 100 Companies sample – hereinafter referred to as P6.	CEO-Consumer Goods	√	√	√	x	x	x	x
9	P7–Top100 Companies sample – hereinafter referred to as P7.	CEO-Financial - Insurance	√	√	√	√	√	x	√
1	√	Ethical Letter of Consent – Purposive 1 - Senior Executive							
2	√	Ethical Letter of Consent - Purposive 2 - Senior Executive							
3	√	Ethical Letter of Consent - Top 100 - P1 - SE							
4	√	Ethical Letter of Consent - Top 100 - P2 - CEO							
5	√	Ethical Letter of Consent - Top 100 - P3 - CEO							
6	√	Ethical Letter of Consent - Top 100 - P4 - CEO							
7	√	Ethical Letter of Consent - Top 100 - P5 - SE							
8	√	Ethical Letter of Consent - Top 100 - P6 - CEO							
9	√	Ethical Letter of Consent - Top 100 - P7 - CEO							

Multiple data sources were streamed against the research objectives to follow. In this way, common contextual groundwork was laid in order to flesh out themes and patterns from one data source (corroborated or contrasted with another. Such themes and patterns are discussed in chapter six under integrated findings. Missing data as shown above resulted from participants' and observer's unavailability. Rich and multiple data sources resulted in findings which were grounded in research theory and empirical reality.

5.4 Research Objectives

To define Intuitive Intelligence and its role in leadership strategic decision making.

1. To define Intuitive Intelligence.
2. To derive an *empirical based* definition of Intuitive Intelligence.
3. To identify the components of Intuitive Intelligence.

4. To describe *how* leaders go about using their Intuitive Intelligence during decision making.
5. To determine if there is a current level of use of Intuitive Intelligence in business leaders?
6. To determine if there are characteristics of the 'ideal intuitively intelligent' leader - descriptors of the prototype exemplar.
7. To identify the role, if any, of Intuitive Intelligence in leadership strategic decision making.

5.5. Phase One

Phase one addressed the following research objective:

To define Intuitive Intelligence from a theoretical perspective. Secondary literature analysis and deconstruction of the definition of intuition (Behling, 1991), was undertaken to determine if there were links to criteria of intelligence such as performance, ability, and development (Emmons, 2000).

The results of Phase One are now discussed.

5.2 Phase One Deconstruction Analysis – Definition of Intuition

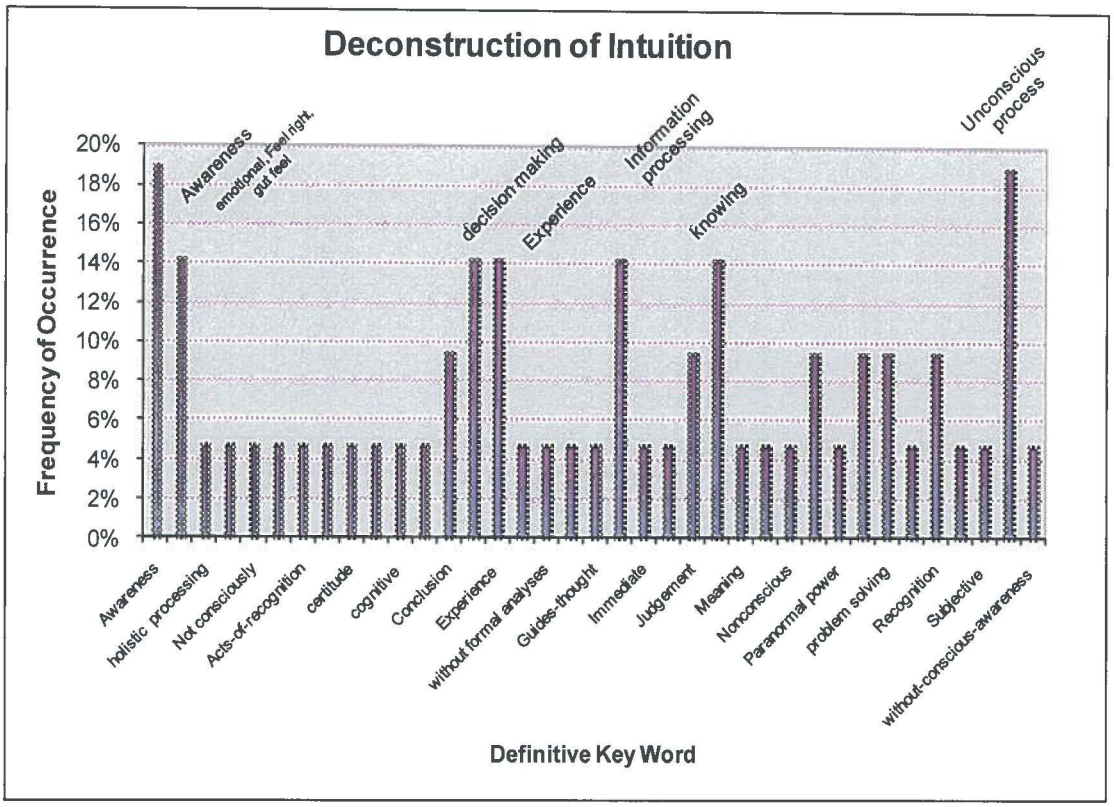


Fig. 5.2 Results - Deconstruction - Phase One

5.5.1 Results - Deconstruction

The findings of the deconstruction trawled up seven key words (awareness, gut feel, decision making, experience, information processing, knowing, and unconscious processing). There was enough support in literature for decision making and awareness to be linked to intelligence (Gardner, 1996; Sternberg, 2000; Emmons, 2000). Since personality trait and sixth sense were of anecdotal value, efforts were thus to establish whether terms such as information processing, unconscious processing, knowing, gut feel, and experience were linked to the main criteria of intelligence. This entailed a focus group intervention.

5.5.2 Focus Group

The focus group comprised of one CEO and four business representatives. They were tasked with the categorisation of the five deconstructed terms. With only the instruction to link the random terms into one of the five

categories, (a design methodology modelled on Behling, 1991), the results are shown in Table 5.3.

Table 5.3 Results of Focus Group – Phase One

A= CATEGORY (Focus group unaware these were Intelligence criteria) Asked to match B with A.	**B=RELATED CONCEPTUALISATION OF INTUITION (From results of Deconstruction – Phase 1)**	**No of terms allocated to category**
1. Performance	**-A form of information processing** **-Unconscious process**	2
2. Ability –of the individual	**-Unconscious process** ~~**-Personality trait**~~ [anecdotal value]	
3. Development –meaning growth, progress over time	**- Sense of knowing** **-Gut feel** **-Experience – distilled** ~~**-Sixth sense**~~ [anecdotal value]	3
4. All of the above		0
5. None of the above		0
Total	NB: Awareness and decision making have already been linked in literature to intelligence (Sternberg, 2000).	5

The focus group had no way of knowing that they were looking for intelligence criteria, and their purpose was to act as a means of external verification of the Phase One desktop exercise. The focus group was externally organised, and participants were unknown to the researcher. An external third party was present throughout the focus group session.

During the focus group proceedings, the group did not ask any questions, but rather tackled the task of categorising the terms. They did however

hand in notes at the end of the 20 min. Notes which reflected: *"Ability was linked as both conscious and an unconscious process."*
"6th sense, gut feel and sense of knowing contribute to performance, ability and development, and are contributed to by performance, ability and development." [As per handwritten submission from focus group].

5.5.3 Phase One Results and Discussion - Theoretical Definition of Intuitive Intelligence

From the above investigation and results, a preliminary definition of Intuitive Intelligence which encapsulated the performance, ability and developmental aspects; derived from an exploratory context, emerged as follows:
Intuitive Intelligence is a form of intelligence derived from intuition, and aimed at solving problems and guiding effective decision making. This linked to: *Intuitive Intelligence: 'A construct based on intuition, which develops and manifests in the performance and ability of the individual…'*
Unpeeling another layer of this definition results in Intuitive Intelligence being conceived as a *'holistic' Burke & Miller (1999:92); 'perception' Jung (1933:567-568); a 'form of knowing'*; a *'way of information processing'*; *'making sense of the world'*; *'immediate meaning'*; that *'may not be achieved easily or at all by other means'*. Sadler-Smith and Shefy (2004:81). **This lead to the study derived definition of Intuitive Intelligence as:**
'A construct based on intuition, which develops and manifests in the performance and ability of the individual; conceived as a form of knowing and holistic way of information processing, which enables the perception of immediate meaning and sense making not easily achieved by other means.'

Conclusion – Phase One

The above derivation was taken as positive indication to further explore the empirical definition of Intuitive Intelligence. It will be seen that based on the findings of the empirical study (Phase Two), even more variables were uncovered, further refining the theoretical definition gleaned above.

5.6 Phase Two

Phase Two begins with Research Objective 2. Research Objectives 1 and 2 both involved derivations of the definition of Intuitive Intelligence as a construct. However, while research objective 1 was completed in Phase One, objective 2 involved a cumulative integration of all the evidence. Thus, objective 2 was also de facto explored by the remainder of the research objectives. The demographics of the research participants were as follows:

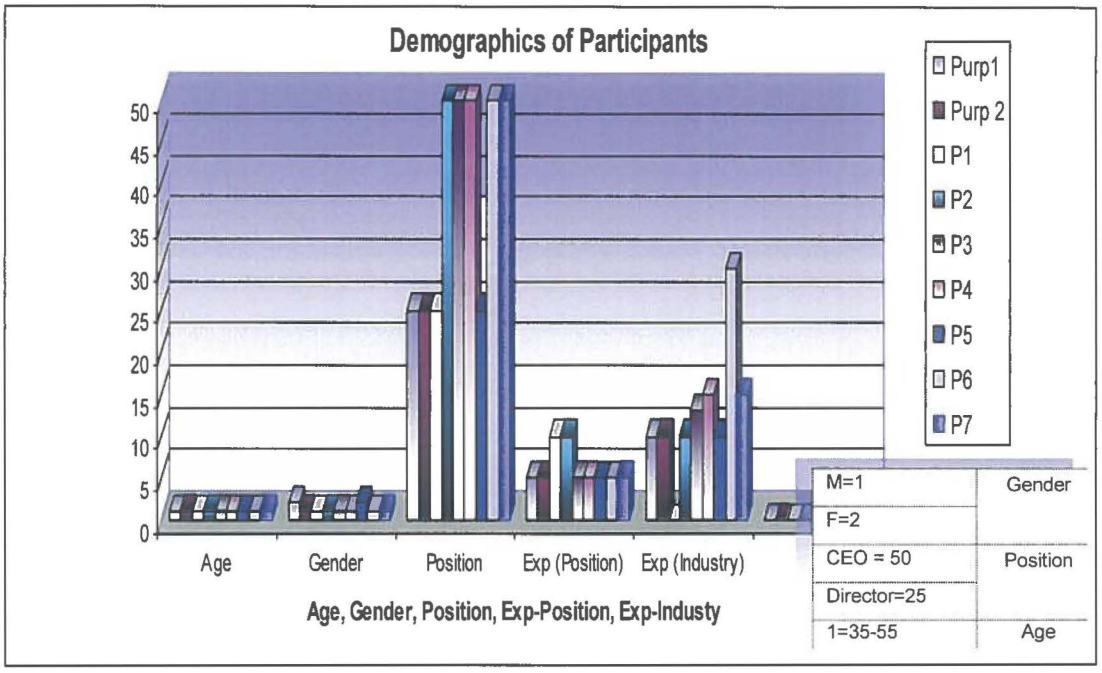


Fig 5.3: Participant demographics – Phase Two

Following the qualitative and quantitative mixed methodology (Love & Holt, 2002; Lacity, 2006), the data sources from Phase Two are shown in Table 5.4

Table 5.4: Shows use of multiple data sources – Phase Two

Serial No	Participant No.	Context – Min 5 yrs in company experience, Min 10 yrs industry experience.	Context Quest-ionnaire	Inter-views	CSI Invent-ory	Post interview sessions	3rd Party checks	Observation	Personal Testimony

Each stream of data was triangulated in terms of the support for (or non support of) the research question. In terms of data richness (Corbin & Strauss, 2008) the actual interviews with senior executives proved to be the most weighted in terms of evidence, and hence is so accounted for in the analysis, results and discussion section to follow. Data analysis in Phase Two involved baseline spreadsheet mapping and qualitative software (Atlas ti), as a reliability measure, with validity consideration for groundedness and density (Barbour, 2008; Corbin & Strauss, 2008). A discussion of the data sources in Phase Two follows.

5.6.1. Context Questionnaire (Pre-assessment)

Based on the literature context, the rooting of intuition in an environmental context of risk and uncertainty and incomplete information (Behling, 1991; Khatri & Ng, 2000; Klein, 2002; Dane & Pratt, 2007) necessitated a context questionnaire being sent to consenting participants to complete. This established a contextual groundsheet enabling fair comparisons to be made (Appendix 1)

5.6.2 Interview Guide

Research questions and sub-questions were brainstormed and subsequently tested via a pilot study to formulate a semi structured interview guide. Transcripts were edited for meaning and sent to the interviewee for verification (Appendix 2). A standard drawing (Jones, 2004) was used at the commencement of each interview process to provide a specified common context of uncertainty, risk, and incomplete information in terms of strategic decision making. This provided a standard departure

point for all participants from which to launch their experience. This would also later be used as the contextual common ground for comparisons on intuitive inputs in strategic decision making.

5.6.3 Observations

These were noted by the researcher during the course of the audio recorded interview in the margin of the interview notes, with regard to any verbal, nonverbal (body language facial expression), and behavioural cues which the leader displayed during the course of the interview. This acted as a subtext within which to root subsequent insights when the recording was re-played during transcription.

5.6.4 Cognitive Style Inventory

Based on Robbins & Hunsakers' (2009) inventory (Appendix 4) the Cognitive Style Inventory (CSI) was used to capture the prevailing cognitive style of the participant. This provided a basis for establishing the participant's decision making style in terms of intuitive inputs.

5.6.5 Due Diligence Post Interview

This was the second formal contact with the senior executive, and sought to capture any residual insights, as well as to give the leader feedback on the analysis work done. Based on this the leader made comments on the post interview sheet (Appendix 5), and reflected on what insights had occurred.

5.6.6 Third Party Observer Input

Appendix 6 shows the inputs made by the third party observer who was party to the decision making made by the participant. This was used to balance off the self reports of the participant, and acted as a VARCS (Validity, Authenticity, Reliability, Credibility, and Sufficiency) check in terms of the evidence obtained.

5.6.7 Personal Testimony

All participants were asked to complete a personal testimony as a due diligence measure to evaluate whether they were personally prepared to

vouch for the value of the study. Since this was the study in entirety, it included Phase One and Phase Two. The personal testimony contains the actual names and signatures of the participant and hence personal details such as names, date of birth, and signatures have been blocked (Appendix 8). In the interests of confidentiality, the same practise has been carried through to the rest of the output documentation.

5.7. Results and Discussion

Results of Phase Two are presented and analysed per research objective. Support [or non - support] of results in terms of the research question is discussed. Based on these inputs, an evaluation is formed in terms of the research position relative to the research objective (Appendix 7). Analysis was also undertaken in terms of qualitative software (Atlas ti) for codes, themes, and patterns, culminating in an integrated narrative of the overall findings and conclusion of the study.

5.7.1. Research Objective One

To reiterate, Research Objective One was:

To derive a theoretical *based* definition of Intuitive Intelligence. This was addressed under Phase One. See point 5.5.

5.7.2. Research Objective Two

To derive an *empirical based* definition of Intuitive Intelligence.

It must be remembered that Research Objective Two involved a cumulative integration of all the evidence, and thus was also data sourced through the remainder of the objectives.

- **Data Analysis - Context Questionnaire**

In terms of identifying the possible environmental variables at play in Intuitive Intelligence, the context questionnaire yielded the following macro environment results for eight out of nine participants. Only two participants (consumer services and financial) reported moderate risk; with the rest of the participants reporting high indicators of uncertainty, ambiguity, complexity, adapting to changing circumstances, risk, and having to make

decisions with incomplete information. Note that due to space constraints, participants from a perspective are indicated in the report as 1, 2, or simply as Purposive 1 or Purposive 2 (abbreviated in some instances to 'Purp' in the case of space constraints). Figure 5.4 shows the results from the context questionnaire.

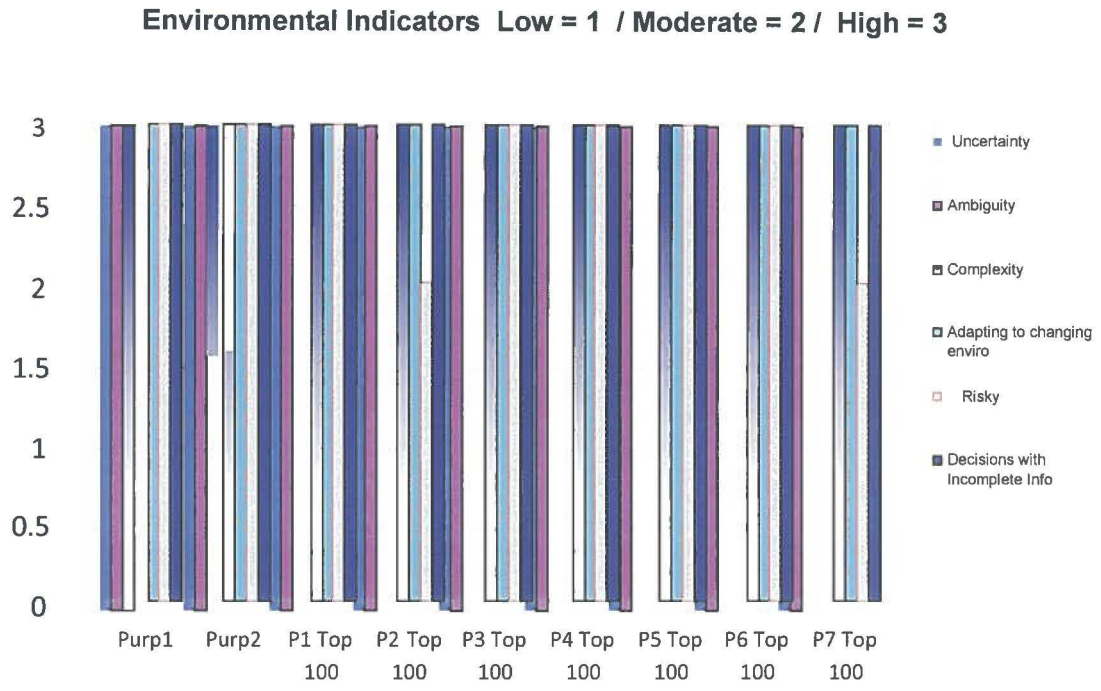


Fig 5.4: Common context used for strategic decision making.

Discussion wise, notwithstanding the standard complexity picture shown to all participants on commencement of the interview, a common contextual message emerged from the data. It appeared that the senior executives engaged in strategic decision making were indeed continually beset with challenges arising from their environments (macro, and micro, external and internal). This pattern clearly emerges as one immerses into the interviews.

- **Data analysis for Interviews**

Data from the interviews were analysed as follows:

✓ Responses per participant were tagged and coded, and themes noted and mapped against the research objectives.

✓ Results per participant were mapped according to actual response from their primary documents; with qualitative software analysis for codes and themes.

✓ Each Participant Response was also then evaluated in relation to the research question.

✓ Each question was subsequently linked and aligned with the corresponding research objective.

✓ Table 5.5 shows an excerpt from the baseline data analysis and results mapping spreadsheet (Appendix 7)

✓ In conjunction with this, qualitative software was used as a reliability measure, as well as for groundedness and density (validity) (Charmaz, 2006; Corbin & Strauss, 2008; Barbour, 2008)

Table 5.5: Evaluation of data sources in terms of research questions

DEFINITION	Criterion Validity				Reliability		
Research Objectives	Questi on asked	Literature Context Source	**Coding used for Objective & Question**	Participant / Top 100	Justifica =tion of rating	Judgement Rating - Agreement or Disagreement terms of the research question.

In terms of a research contextual baseline, all participants were asked to describe an effective and an ineffective strategic decision using intuitive inputs; with the use of a standard graphic as a departure point. This served as a common contextual reference to guide whether intuitive inputs were used; if they were used effectively; what blunders were made; and what were the lessons learnt on hindsight. This not only helped understanding of what an effective intuitive strategic decision was, but also (in the case of blunders, what it was not). A weighting scale reflected the position of the participant in response to the research question. This was further mapped to the research objective. A narrative style (Elliot, 2005), was used to portray relevant events, factors and themes (Corbin & Strauss, 2008).

- **Effective Strategic Decisions using intuitive inputs**

Question: There are many cases where top executives are expected to make effective decisions without all the information at hand. Can you relate an instance when you used your gut feel or hunch to guide you?

Purposive 1: "The company's view and it was largely the major shareholder view.....was that we had legally binding documents, agreements, and therefore we should proceed purely on the legal aspect. My background is law, and I knew that that was true. But the undercurrent was such that it didn't matter how legally binding those documents were we would never have a decent relationship with the [indigenous folk]. And the bigger picture - issue was that there was the deep sense among some of us and I believed absolutely implicitly in this - that we needed to just settle this." [Text has been edited to maintain confidentiality with regard to the identity of the indigenous folk]

- **Results**

All nine participants were able to relate experiences of effective and ineffective strategic decisions using intuitive inputs. These ranged from the above land settlement and agreement, to mergers, acquisitions, and appointing of senior executives.

- **Ineffective Strategic Decisions using intuitive inputs**

Question: Can you think of an example where using a hunch or gut feel resulted in a 'bit of a blunder'?

Purposive 1 "My anticipation was that he would continue to use the external people, because that's where the expertise was, but that he would bring a different perspective to it. And it was a complete oversight on my part that I would be able to work with him whereas, other people hadn't."

The above response typified the range of ineffective decisions made by participants, from blunders (oversights), in hiring senior executives, to mistakes in mergers and acquisitions. All nine participants were open in

sharing these decisions where intuition did not serve them well. As Purposive 2 describes:

"Usually yes, I can think of a few situations where I've gone on the assumption that it's so obvious, that other people should see it. And what I've come to realise is that often in those circumstances...what's obvious to me is not obvious to others. So we find quite often, and that's...it's not reading the people properly, has been often where my intuition has not paid off."

Or another example where intuition has not served the participant well from P6:

"There were things that then emerged, which clearly – and notwithstanding having got back to my board. Told them – it was a merger – told them what the transaction would be about, etc. And in less than 24 hours the other party had fundamentally started changing the deal, and forty eight hours later, it had moved even further away, and a week later when I saw the chairman of the company it became clear that he was not going to stick to what he'd agreed originally. And that's it – that's why I say, some of these things really in the heat of - or in the intensity of negotiations – I've certainly made some calls that I am not happy with."

- **Discussion**

The approach of looking at blunders to see what Intuitive Intelligence is *not*, proved to be a useful one, and it became clearer, in the emerging relationships between quotes and codes as follows:

✓ There is Board accountability as a consequence to blunder. So it (the blunder) is to be avoided at all costs. (This study can help in this respect by differentiating between purely intuitive decisions and those decisions which are intuitively intelligent).

✓ There is an ego 'personal' component to blunders, for example with P6 'I always say men are driven more by ego than people realise sometimes.' This may 'çause' an ineffective decision to result.

✓ Time is part of a necessary ripening component for Intuitive Intelligence. *As reported by P7: "You're dealing with an industry leader that has 25% of the market share. We're double the size of the next guy. It's a*

ninety three year old business. You can't mess it up. You see decision making on big stuff is far more thoughtful and concerned. So don't make those decisions on the fly. Don't make those big calls on the fly."

✓ Learn from hindsight. As reported by *P3: "Learn on hindsight." As with P4, being 'blindsided by intuition.'*

✓ Pressure / Stress appears to negatively impact on decision effectiveness to the extent where even the promptings of an intuitive sense are rendered subservient to the pressures of the moment. As reported by *P3: "I'm telling you this one is where my gut instinct told me to do something else but I did the opposite."*

The above themes are supported by literature for e.g.:

✓ *Blunder – "'...enriching intuition's seedbed is a mixture of vague recollections, incongruous observations, and hazy judgements of events gone by.'" (Rowan, 1987: 37) "A boss can almost smell those failures before they arise..." (Rowan, 1987: 14)*

In evaluating the research position post results and literature review, the following emerged from understanding the evidence:

The benefit of hindsight (case made for Intuitive Intelligence), is not to be blindsided by one's intuition and to take time to check the quality of the decision. Being aware also of any ego drivers and in so doing, enact a reality check. This might serve to increase the intuitively intelligent mix in the decision rather than banking singularly on the intuitive. Time presents additional pressure; which, coupled with the macro and micro environmental challenges that the senior executive faces, meant added pressure in that executives' responses to challenges. Notwithstanding these factors, their decision making needed to be effective – right first time.

- **Conclusion**

Effective and ineffective strategic decisions with intuitive input were described, and it does appear that there is a difference in the quality of the decision using intuition versus that resonant with Intuitive Intelligence.

5.7.3 Research Objective Three

To identify the components of Intuitive Intelligence

Question: If you had to picture in your mind all the elements going into the making of this 'spot on' type of intuitive strategic decision, what would this look like? [Participant was given a notepad to enable a drawing or free text] The following primary reports from the interviewees bear evidence.

Purposive 1: "So, I would like some facts. But if I had other facts that came into the process during the decision-making, I would not ignore them by virtue of - 'I've made up my mind.' And, I think I do listen to what other people say. Interact with them; both in a sort of microcosm and macrocosm perspective, you know. If what they say and what they do doesn't quite gel well." [Alignment between speech and action. The executive engages in an integrity check. Ethical link. Checks the consequences, micro/macro context] *"You know, I would look at that. I think that I can see their point of view, quite often. Even if I don't agree with it, 'ok, how does this impact on other aspects....."* (Pauses for thought).

[Observation: These pauses were typical throughout the nine interviews indicative almost that the participant was attempting to give words to the wordless].

Purposive 2: "It's the missing part [Intuitive input] *that stops me from making a decision of yes or no.* [Intuition itself as intuitive input] *It's the missing part saying that if the business works, if there is money behind it, so if for example, someone said to me, take the new coal project. If I didn't see that coal was selling for 180 a ton, and it cost you R90 to mine. I mean just that disparity said there's money here"* | *"Intuitively I know there's a way of doing it. Might take me a while, but we'll find it. Once I've made that decision in my organisation, the rest of my guys, get stuck into it, and create business models, and financial models, and go and see the banks and give return on equity calcs. And do all of those things."* |

Participant 1: "When you're dealing with internal stuff at the end of the day, like labour and stuff, and staffing – it's always about precedence. If I make a decision with one person now, will it cascade into other areas of the business? If it's an - if it's an issue with a customer, and you know like something's unreliable about the plant, you try to get the customer on the go right now, so you do something, what's your best gut feel, [Intuition] *alright, then... if you need to work on it later you do that…leave it."*

P2: "Well, at the first level, I mean you get as much info as you can. And your little graphic here is quite apt in the sense that I would say that every single decision is made with imperfect information" [uncertainty] *'And that's a fact. It's a question of degree'.* | *'But what one tries to do, and what I think - I don't think you can say it gives you the right insight. Causes you to make the right decision. But you improve the odds, with time. And that's what this is about. But that's what you have to do when you work with uncertainty. You have to accept that you are not going to get it right all the time. And you probably need to understand how to deal with it when it goes wrong. Because it is going to – a percentage of the time. But for all that, you have to try and improve the odds all the time.* [Use of conscious effort] *It's not a perfect world'.* | *'Ja, and the pressure. Where it helps, say you have a deadline next Tuesday. There is no point going to a meeting and saying, you know I'm still collecting arrows! You get the point where you have to perform. And I think the process of organising the insights, is accelerated by the pressure of deadline. I don't think it makes for better decision, but it makes for a decision'.*| *'So I mean those are the two things. Living with uncertainty and ambiguity, and you have to be able to do it. And that other thing is the willingness to accept the consequences of making a decision knowing – based on our discussion, that they are not all going to be right."*

P3: "Evaluate that and come up with a fairly well formed position. On the political front, one can have… one, two, three different inputs sometimes conflicting information; one has to make a judgment call" | *'And then one*

has to evaluate those risks, understand those risks, and then, at the same time, also maximise the return to shareholders, taking into account, that the risk elements are higher."| *"So, from that point of view it becomes incredibly difficult to actually really understand what it is they are - they might say one thing but that's not necessarily what they mean, and vice versa. So we really need to take that information, understand that we don't have the full facts yet."* [Know what we don't know – the use of an intrapersonal awareness component]. "*There are calls for elections this year. The government of national unity, the MDC don't want it, the one faction of the MDC's split away now. Now it looks like it's joined the government, so it's a bit of a mess to be honest with you. And in that mess, in chaos, one needs to continue unfortunately to make investment decisions. And as I said because there is a timeline, and because there is - other factors that come into play, that one can't just say well, okay it's too risky here, I'm not gonna make a decision. Making no decision is actually worse than making a decision"* | *"And anything that you do around South Africa, therefore the thought process that you go round in South Africa, 'is it a low cost ounce? Is it driving me down the cost curve, etc'. Hence the intuitiveness comes in at the beginning as guided by the overall arching principle. And so that's kind of how we work it in South Africa."* | [Intuition used as a starting component]

P4: "But I think basically in this kind of business we're looking at internal dynamics, which are labour, cost pressures, regulatory pressures, all that. I'll take input from staff, who work for me who are very, very much into that field. Then, on the external side it's about, you know, the xxx markets, the macro environment, the health of the organisation, since we're so heavily into that – the auto industry. I'll take the ...reading about what's happening to those...And you're marrying those two together, and to the extent that you're maybe getting consistently negative news out of your internal environment. You would I think in my own case, if you're getting negative views out of your internal environment,...negative out of external, you – it would – it shapes our decision on whether to maintain or cut production mainly. And the worst one can do is cut production and the prices come right in three months time, because it's not a rapid process to bring

production back. Whereas if you have a situation where it's all going swimmingly well internally, and not very well externally, you're probably inclined to press on. Put the blinkers on, press on, wait for better times. Because the guys you're talking to inside your business are saying, 'We're doing so well, coping with issues' There is a barometer which is how people feel internally about issues. And how I feel externally about issues. And it's where these two dovetail".| "And you know, for instance things like - for instance recently, two weeks ago, there's world renowned think tank out of Canada which reviews many businesses called the Fraser institute – you may have heard of them? They've just voted South Africa number 67 out of 70." | "Ja...we've slid over thirty plus places over the last decade. We now sit down there with countries like Zimbabwe and Somalia, and the Congo. Yet we used to rank up there with Australia, US, Canada". | "So it's that kind of [info] *you're processing, and maybe it's wrong, but you know I - these are just examples."* [Reads from headlines] *"You read this and you say, hang on, that shapes my thought.. 'Nationalisation talk to scare off investors'. 'Tough year for platinum miners' You know, the environment, I think the thing is - at a senior level like myself, you are spending a lot of time, or want of a better word, scanning the environment, absorbing the environment;* [contextual sensemaking; conscious effort], *talking. I mean I've just spent this morning, the early hours of this morning, talking to a shareholder in Australia, who says 'It's all too hard. I just must...I just want out.' "* |

[Contrasting and ambivalent views on intuition were offered by P5.]

P5: "It's not just intuitive ability, maybe it is intuitive ability, but it's the sharpness of the eye to focus on the right things and not the wrong things. 'Cos in these environments you get a lot of noise. You've got to sift out the noise". | "Everything's about understanding that game of consequence".| "It's about playing those scenarios out. | [Indicates leader needs an understanding of the various scenarios at play – scenario planning and foresight. Leader needs to understands the moves and consequences in terms of performance. Risk / consequence]|

P6: "That uncle who might seem an erroneous character has a role to play because he represents the father's generation, and a relationship with the grandfather. So, trying to understand that…so executing strategy isn't a linear process. It goes through peaks and troughs but you've got to understand that." | *"But certainly since the financial crisis of 2008, the way in which we negotiate, conduct business, business partners out there – many of the transactions out there - many of the rules – if you believe that you sell it at price x of the value proposition, you would get the following result. So the world of business that we worked in - I think the rules have changed..."*|*"That is a level of ambiguity and complexity. It's very hard to derisk yourself. You almost got to say it comes with the territory, okay? And then you make judgement calls. 'Am I willing to live with this ambiguity?' Complexity you begin to unpack over time. Hopefully immerse yourselves, understand it better. Ambiguity - they're just things where you're never gonna be sure as to whether it will always be like that in particular jurisdictions or not."'*

[Leader's thorough scanning of the environment prior to making intuitive decision. Macro-focus inputs into decision making socio, politico, economic, regulatory, and in relation to layers of complexity, ambiguity, risk and uncertainty].

P7: "Yeah, I mean do I have to start something? Do I have to address a competitive weakness? Got a people problem? What's the context, you know? [Sifting through of contextual sensemaking – appears to be a critical component]. *Where am I relative to the others? Okay? I'm always asking that question."* [Critical question / script going on in the mind of the senior executive as it appears to trigger the 'intuitive intelligent adaptive response. Intuition tends to be insular in thinking - tending to bias creep – not so it seems with Intuitive Intelligence. Intuitive Intelligence appears to be come across as more pro-reality testing…in terms of the environment.] | "*What's the issue here? There's a new piece of legislation coming - what's it mean for xxx. Negative? Okay - more costs – but, what does it mean for the others, 'cos they're all affected. The time frame - how long have we got to deal with this thing; implications?"*| [It's as if they have a ready script running

at the back of their minds. And coming back to the role of Intuitive Intelligence – it's as if it allowed them to read the script beforehand]. | *"All stakeholders - the people - how does it impact the people? That's a big issue for me. How does it affect the people?"* | *"And then of course the strategic context. You know, for example, right now I'm looking at least two acquisitions."* [Critical – their understanding of the context]

- **Results linked to Objective Three**

From the overture, it does appear that in preparing to respond to strategic challenges, the leader 'immerses' (P6: 'immerse yourselves' [in complexity]; meaning not only are they internally aware, but it also means they have an eye on the changes out there, [continual scanning and streaming situational awareness]. As a possible consequence, the quality of their decision-making might be improved, and hence their performance in decision making and their judgement calls might be made more effective.

From the above and composites of the handwritten notes from the leaders themselves, various inputs can be identified as components of their intuitive decision making. These emerge as Intuition, to begin with, contextual understanding of issues, risks / consequences involved, complexity and uncertainties, knowledge base (technical, contextual, cultural), leaders' experience, foresight, skills required; awareness (including reading of situations (situational awareness); awareness of the intrapersonal (within leader) and interpersonal (people); emotion / emotional intelligence; ethics (values) input. As a constant backdrop there was also, the leader's conscious effort, and continual learning.

Fig 5.5: Components 'gearing up' Intuitive Intelligence

Furthermore, all nine participants mentioned elements which formed inputs into their intuitive decisions. Intuitive decision making was triggered by an uncertain, complex, ambiguous risk comprising environment. These were domain specific, and differed from leader to leader. Further factors emerge from the evidence.

✓ A leader has to have the ability to 'immerse in the complexity, 'live with the non-linearity' unpack the 'ambiguity', and 'de-risk' the risky. (Refer to Chapter Five: Finding 5.7.1.)

✓ Contextual sense making ability is vital to this ability. [Also links to the leader ability and response called for in these situations].

✓ Time and timeframes - necessary in order to understand and 'unpack complexity'

✓ Timing was necessary - make the right decision at the right time. Later may be too late. Time might also be a factor in ripening of their Intuitive Intelligence.

✓ The playing out of the various scenarios in the mind of the leader. Those 'moves' are mapped out as a result of the experience, practice, skill and knowledge base of the leader. Shows scenario planning and foresight link.

✓ In-depth risk understanding and consequences thereof.

✓ Awareness comprising the interpersonal, intra-personal, situational, and foresight, appear to form an integral part of the leader's ability and appropriate response arsenal to act effectively in an ambiguous situation. Foresight and mapping (above) appear to overlay this, as part of a mental scenario planning movie that continually runs in the mind of the leader; action and script, changing with the 'set' and situation.

- **Discussion**

Although all leaders mentioned elements which formed inputs to or acted as triggers to their decision making, what was needed was to distinguish if any of the above were in any way associated with intelligence. All leaders had their eyes focused on the environment, constantly scanning for changes, in

order to adapt to them. How well they did this appeared to reflect in the quality of their intuitive decision making; in reference to their blunders.

In evaluation, the leaders appear to be aware of the macro changes to the environment including an in-depth risk / consequence understanding. These results resonate with the literature e.g. Burke & Miller (1999) where components of intuitive decision making are discussed.

Comparisons of the Components of Intuitive Decision making

Burke & Miller (1999), classify the decision making aspect of intuition in the following ways.

- Experience–based decisions. Here intuition resembles a schema/mental map built up over years of practice.
- Affect – initiated decisions. Intuition as 'gut feeling', and where decision making has a central emotional element.
- Cognitive based decisions, Intuition is based on learned knowledge and skills,
- Subconscious mental processing, Intuitive decisions are subconscious mental processing that occurs automatically in the background,
- Value based decision making. Intuition is personal introspection whereby the decision generated is compatible either with company culture or the individual values.

Table 5.6: Comparison of components of intuitive decision-making. (Literature versus Research results)

Literature	Research Results – Phase Two
1. Experience	1. Experience
2. Emotion or Affect informed e.g. (Gut feeling)	2. Emotion, emotional intelligence, Affect informed (Gut feeling)
3. Knowledge	3. Knowledge

4. Skills	4. Skills
5. Automatic / subconscious information and mental processing	5. Automatic / subconscious information and mental processing
6. Value based/ Ethics issue	6. Ethics link
	7. Awareness (interpersonal, intrapersonal)
	8. Intuition – based construct
	9. Risk and consequence awareness
	10. Foresight- capacity to foresee events well in advance. Scenario playing / planning is said to help this.
	11. Continual learning
	12. Contextual sense making, including social cultural, political and economic on macro and micro levels.
	13. Conscious effort on part of the leader to keep up the above

In terms of the above components, Rowan (1987) reiterates that "'*...intuition leads nowhere if there is no sense of where the risks are and how to avoid them.*'" (Rowan, 1987: 88). When this flows through to an effective decision, there appears to be much more than intuition involved. Couple this pure intuition with years of exposure, experience, learning, and awareness, to end up with a powerful tool: Intuitive Intelligence.

Rowan (1987) appears to concur: *"Elusive as it is, we do know certain characteristics it [intuition] comprises. It comprises of relationships, involves simultaneous perception of a whole system, and can draw a conclusion - not necessarily correct - without proceeding through intermediary logical steps. That's why intuition comes with that queasy feeling of almost but not*

quite knowing." (Rowan, 1987: 12) Intuitive Intelligence, however, with its awareness component may well provide the necessary composite mix required for the desired holistic and effective leader response.

- **Conclusion**

The above components provide a sense of a certain holistic functioning and intuitive processing which is geared towards attaining objectives set by the individual; a functioning which demonstrates intelligence in its operation, linked in to the leader's own emotions, emotional intelligence, intuition, and capacity for awareness. It is thus termed Intuitive Intelligence.

5.7.4. Research Objective Four

To describe *how* leaders go about using their Intuitive Intelligence during decision making.

Question: What would you say is the actual process you use to make such a decision - how would you go about making a 'spot on' intuitive strategic decision. [Using their example given of an effective decision as a departure point]

- **Results**

Purposive 1: "I'm very open to influences from other people, or other factors. I think that very often I would like that first thought to be fairly well-informed. I wouldn't like it to be something you know, plucked out of the air. So, I would like some facts. But if I had other facts that came into the process during the decision-making, I would not ignore them by virtue of- 'I've made up my mind'. [Participant does a reality check - interpersonal awareness - checks what others think].

Purposive 2: "So you can't force a change on an economy. And I must admit I look at it and I think to myself, I think they're actually wrong. They changed quite a lot; they don't see it for what it was. So there were checks. I think that's the real thing. And more of what I did, I took the intuition and did the rational afterwards. But the intuition set me on the path. I wouldn't have examined this if the intuition didn't say 'there's something here.'"

P1: "Yes, and then sometimes it won't be overnight. It can take a day or two. And if it's...if it's a strategic enough decision ...." | "Because you know if you sort of ...if you monitor it, you can re-engineer the thing on the way. I'm not gonna say I didn't make the right decision, I'll just say that - the original path was probably ...could have been better planned."

P2: "Ja. I think, you know the process is quite difficult to describe, but, you know …many facts or as near facts as you can get. And checking those facts by reference to some known point…you know. And I think it's a great underestimated advantage."

P3: "So, as I say - guiding principle (starts writing), *objectives, and then as I say a diagrammatic representation, okay, and so you go there, and then you basically you overlay that with risks, and the risks are both strategic, and project". | "Then I overlay that with the rewards for - and I'm gonna put stakeholders, 'cos I think we have moved on a little bit in life that we're not only interested in shareholder return, but also the stakeholders,-----for stakeholders. And essentially as I say, that for me is sort of the framework which I would.." | "So this is what I call the framework. Then there's another process that has to take place …intuitively you has to say - right that's fine. Then you have to test your framework, against a peer group. And effectively you get feedback from that, and that can loop back to trying to say 'right, now not only am I ready to adopt my guiding principles, with my diagrammatical representation, but I must adapt it slightly" | ".....and why I know most of it is intuitive is because I actually write very little. You can see my handwriting's terrible."*

P4: "But I think basically in this kind of business we're looking at internal dynamics, which are labour, cost pressures, regulatory pressures, all that. I'll take input from staff, who work for me who are very, very much into that field. Then, on the external side it's about, you know, the xxx markets, the macro environment, the health of the organisation, since we're so heavily into that – the auto industry. I'll take the ...reading about what's happening to those..."

P5: "It's when you've run out of options on the tangible that you have to go to the gut. But you've got to start informed with as much information as possible. Just every now and then there is a gap. Your information can only take you so far, and you need a bit further. But you still got to be informed whatever you do. You still got to be informed as informed as possible and then from there you got to just take that quantum leap." [Intuitive leap of faith]

P6: "There is the rational, okay, there's all the rational stuff. Then there is the kind of psychological, and most important, there's the emotional. And getting the right mix between them – will it allow you to achieve your strategic objective of getting the business or not. Part of that is fed by intuition."

P7: "Okay, well the issue – what's the issue. The context –timeframes, the implications" | *'Yeah, I mean do I have to start something? Do I have to address a competitive weakness? Got a people problem? What's the context, you know? Where am I relative to the others? Okay? I'm always asking that question. What's the issue here? There's a new piece of legislation coming - what's it mean for XXX. Negative. Okay - More costs – but, what does it mean for the others, cos they're all affected. The time frame -how long have we got to deal with this thing; implications? All stakeholders - the people - how does it impact the people? That's a big issue for me. How does it affect the people? Do I have to fire people, do I have to employ people, do I have to train people – what's the people side of it? And then of course the strategic context."*

- **Discussion**

Notwithstanding the individual uniqueness of each response, as shown above, Mintzberg (2001) described four phases in decision making which can be glimpsed in the participant's responses. For example Preparation (*gather layers of info, start from the rational*), Incubation (*it can take a day or two)*, Illumination (*intuitively, you have to say – 'right that's fine')* and Verification (*you have to go and test your framework, against a peer group).*

There appears to be a process at work within the leader which informs their decision – as non verbal and as 'difficult to describe' as it may be. Whether this process is identifiable, as an Intuitive Intelligence at work however, needs examination in terms of the stipulated criteria of intelligence (Gardner, 1984). Certainly a mental imaging process occurs (ability), and an envisioning (ability). Development is certainly evident in terms of the incubation phase of the intuitive process. Performance then remains the last check, and since these were the processes describing the effective decisions, performance can be taken as indicative in the effectiveness of the decision. The latter has been verified in chapter 5, objective two: 5.7.2 of this study.

By way of comparison, Figures 5.6 and 5.7 show the difference between a process taken to have a purely intuitive input, compared to the process mapped from the research results – showing potentially an Intuitive Intelligence input.

Robbins & Hunsaker (2009), linked intuition with the ethical decision making process in the Fig 5.6 sequence below:

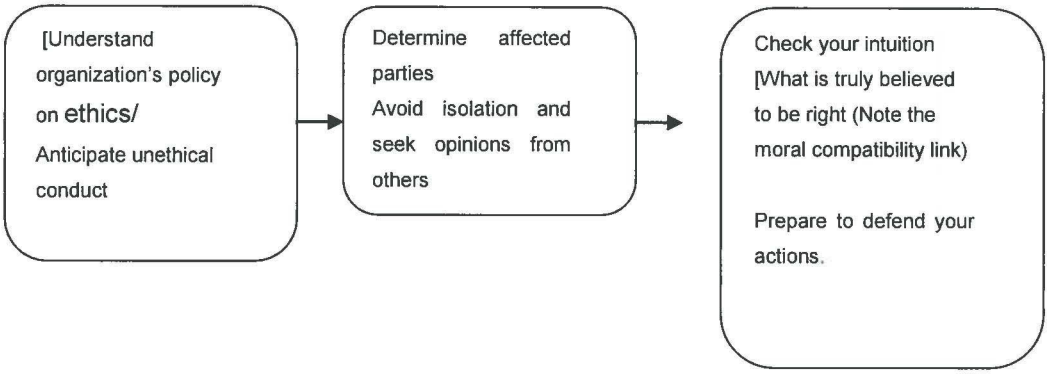


Fig 5.6: Process of Intuitive Decision-making

(Adapted from Robbins & Hunsaker, 2009: 321)

Intuition is used as a stimulus or generator in the above decision making process. Guidelines used at the start of the process say: *"Trust your intuition. When ideas are presented that seem right to you, be courageous enough to implement them on the spot without waiting for further advice opinions or advice." (*Robbins & Hunsaker, 2009: 321).

However, when compared to the research results, and in relation to the intuitive phases identified by Mintzberg (2001) the following process emerges:

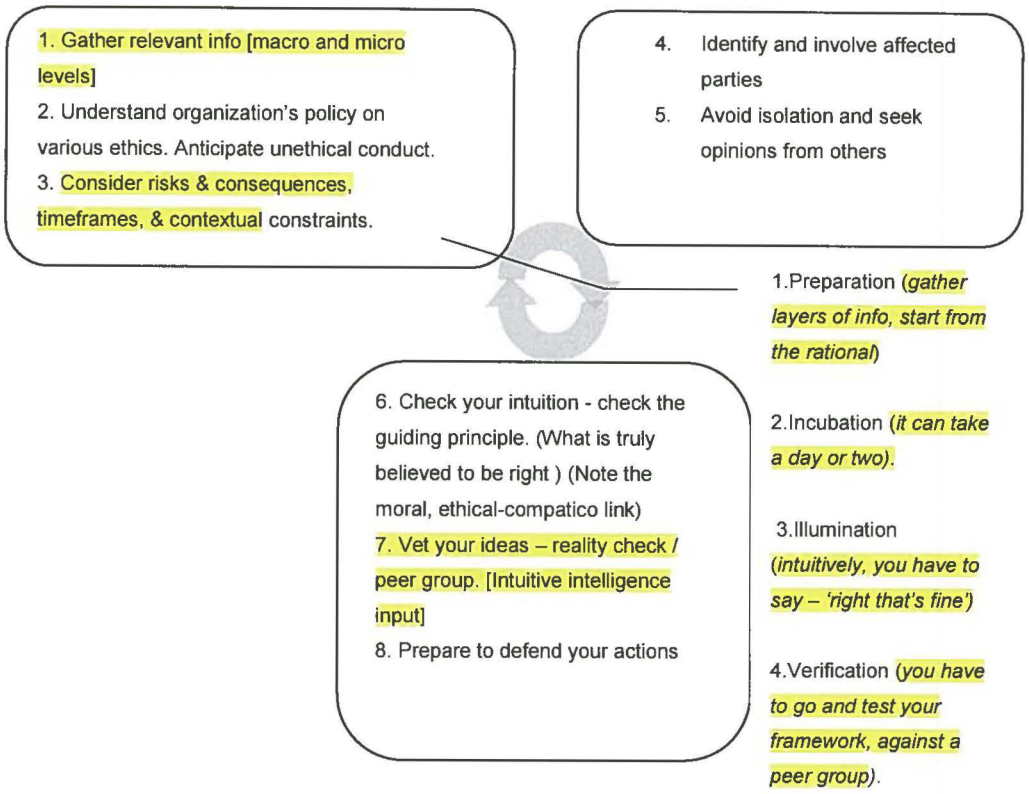


Fig 5.7: Process of Intuitive Intelligence in decision making. Comparison of research results

Adapted from Robbins & Hunsaker (2009: 321); Mintzberg, (2001)

In terms of the strategic decision making process, intuition is used at the very start of the process, almost with the intention of ***suspending*** judgement. However, in the decision making process provision was made for an Intuitive Intelligence check, which was used at the end, in order to ***ratify*** judgement. The role of intuitive input is hence used as a check and balance in the decision making process, especially when confronted with unethical situations within the organisation, and as a check almost at the end of the decision making process. This indicates a conscious application of a 'subconscious' process by the decision maker – the leader in this case. This has further implications for use within the organisation. Leaders can be guided in applying intuitive inputs in decision-making, and the intelligence therein – and that it is not a paranormal power bestowed upon the select few. (Agor, 1989; Burke & Miller, 1999)

One contradiction arose when a leader mentioned that perhaps this was 'not intuitive ability' and quite soon thereafter acknowledged 'maybe it is intuitive ability'; qualifying this with the ability to have 'the sharpness of the eye' to focus on what's important'. It is also interesting that this leader acknowledged a change in his own decision making style; in terms of changing from more analytical to becoming 'more intuitive' over the years. It is pertinent also that 'eye' is mentioned, as it is linked to the leader's inner vision to 'see and envision.'

- **Conclusion**

Echoed in the themes discussed appear to be glimpses of an intuitively intelligent mix manifesting in effective decision making. Decision making style appears to have shifted from heavily analytical to more intuitive within the leader, over time. Whether this is an indication of a development of Intuitive Intelligence within the leader over time, is certainly a possibility. What the relationship is between Intuitive Intelligence, time and possible other variables in the mix, is open for further study, beyond the exploratory remit of this one.

5.7.5. Research Objective Five

To determine if there is a current level of use of Intuitive Intelligence in business leaders.

Question: Has your intuitive decision making style changed over the years? More intuitive or more analytical in your decision making style?

- **Results**

Participants reported their decision making styles on the contextual questionnaire as follows: Six leaders had clearly become 'more intuitive'; two reported that their decision making was not any more intuitive than previously due to the risks facing them. When asked if their strategic decision making style had changed over the years, the following was reported:

More intuitive	More analytical	Both intuitive & analytical
6	0	2
Non response (P6)		1

None of the participants reported that their decision making had become more *analytical.*

Participants also reported on the frequency of their intuitive decision making as follows:

'I have to make strategic decisions without all the complete information':

Daily	Weekly	Monthly	Other - Specify
		8	
Non response			1

Due to the theoretical sampling used, the question of decision making changing over the years developed after Purposive 1 and 2's interviews; influenced by their reports on how pro-intuitive their decision-making had become over the years. This question was thus incorporated into the Top 100 interviews.

P1: "If you making them as a second nature now, it's not something I CONSCIOUSLY think about… Somebody asks me a question – I'll make an instinctive answer in my head. Then, I'll wait a while, my mind gears through the permutations. And then the decision is made."

P2 and P3 qualified their positions 'Both' as below:
P2: "I, no I don't think it has, actually. I think (sigh), I think the way I – some of the earliest decisions of my life are quite similar to the way I decide on things now. I've probably learnt and got scar tissue. And that experience...it's more an accumulation of...experiences." [And it appears that intuition has changed right along with him, developing as he does…]

P3: "Look, I think it's still intuitive, but as I said, I overlay it now with what I call the conscious decision making process rather than unconscious decision making processes. [Showing conscious effort]. *And that I suppose experience has given me ummm, a framework in which to work within, as I say, sort of guiding principles. And I think you know, that experience of having gone through some good decisions, some bad decisions, to know kind of intuitively what works what doesn't work. It's not to say that you mustn't push the envelope in new directions, we try that. And you know I have to say .....but certainly it's expanding - that process is important. But I think certainly over years, ja, I think I've become maybe more disciplined in the thinking process.* [Again, conscious effort]. *And when I mean that, I don't mean the actual process itself, but in terms of how I convey that process to third parties."* [Awareness - intra and interpersonal]

P4: [Sighs heavily] *"I'd have to say...if you'd asked me that six months years ago, I would have said more, but I think perhaps been a bit shaken, I think perhaps what we've got, when the world gets as horrible as it did....Put it this way, you know, my intuitive thing would have been to do this, but I'm perhaps getting a bit more, what's the word – 'dissonance.'"* [Risk attenuating intuition into dissonance, and shifting into Intuitive Intelligence]. *"I think 'Is this the right thing?' Whereas – I guess it's a feature of how you feel risk wise. Well, if you are in a very risk averse mood, I think intuition is made subservient a little bit in the decision maker. If you're, you know, upbeat, you might take into more factors including your intuition. Maybe you've got to do it; maybe it should be the other way around, which is when it's all bleak. What is it you really think? It's like betting the farm maybe or something like that. But, interesting question."*|
"'Yeah, it does change. Yes and I think it's also as your mind changes over the years, and as you gain more experience, more wisdom, maybe...?'| Cos' it's shaping how you evolve. Or shapes how you grow and the whole bit."

P5: "I used to be more analytical – I was an analyst after all. I still feel that, you know, it might be 80% analysis, 20% intuition. I don't think it is 80% intuition over the years. So I've had to absorb more of the ambiguous and less known." | *"I still think that you do need a solid base of knowledge - be it on the decisions of fact. It's just -especially when you got twenty billion rand riding on the investment. Like a game of chess –it's easy; it requires a certain amount of intuition but not much. I know when there is a big black hole – you gotta make a call, you got to make a move else you can't… That's where the intuition comes in. Yeah."*

P6: "There have been times when I have been more intuitive I suspect than I am now. Because the risk was not as great as the risk is now - in other words if something went wrong we could live with it. Whereas if something went wrong now - the more complex the organisation is, the more things we

have to do, the places we have to go, things we have to understand. I think the more complex that has become the more important it has been for me to understand ...so I never let the intuitive side of me go."

P7: "It's become more intuitive. And I've had more confidence. Now remember one thing I'm going to say to you – don't think that because I've said to you 'I've got a couple of things right; I struggle to remember when I got a big thing wrong. Don't think that every day, I don't – every single day I think what is the worst thing that can happen to this company". [Conscious effort, scenario planning. Effort to build foresight]. "*You might think that's strange. I drive to work and I think what's the worst thing that can go wrong in this business. So that is my point of reference."*

- **Discussion**

The subtext of inter and intrapersonal awareness as a component to the decision making, and the space between what one thinks and what one actually conveys to others, and *how* one conveys the message, emerges. This theme has recurred and has cropped up in Bower (1970), where leaders made intuitive decisions and then used facts to justify them post facto.

In evaluating the evidence, risk, experience, exposure and even wisdom, emerge as important influences on the mechanics of a decision making style that changes over time, one which an Intuitive Intelligence enhances. The leadership response *to do what has never been done before,* has been discussed in Chapter Two.

- **Conclusion**

If one has to re-visit the criteria of development of intelligence, and ask – does intuition appear to have the potential for development over time, the evidence in terms of recurring themes seems to weigh in on the positive. That one might well be looking at an evolving intelligence at work, which the seasoned leader develops over time seems part of such a mechanism. Again, a recurring theme is, that this ability has developed over time, and

may also be in part due to a conscious effort and continual learning on the part of the leader. Clearly an ostrich approach to change is far removed from such an evolution, and if anything, given the timing and effectiveness of such decisions, foresight appears to be the gift of such conscious effort.

5.7.6. Research Objective Six

To determine if there are characteristics of the 'ideal intuitively intelligent' leader [descriptors of the prototype exemplar].

Two main data sources triangulated under this objective viz. interviews and the Cognitive Style Inventory (CSI). Firstly the results from the interviews were discussed under two related questions as follows:

Interviews : *Question: 4. Do you think this is an ability which top executives should have compared to other levels? [If so, why?]*

Interviews: *Question 5. Say other senior executives asked you how to develop this ability to make 'spot on' intuitive strategic decisions what would you say? [*Under what conditions/factors; what characteristics required*?]*

- **Interview Results**

Here a sense of what core characteristics, and competencies of the intuitively intelligent leader, emerged.

Question: Do you think this is an ability which top executives should have compared to other levels? [If so, why?]

Purposive 1: "I don't think that once you are a top executive, you suddenly get Intuitive Intelligence. I think it is something that manifests itself more greatly if it's given a space, where it [is] accepted and encouraged." [It is capable of developing, given an encouraging 'space' and over 'time'.]

[How to develop it?]

Purposive1: "I really struggled with that. I don't know. I think you just had to be receptive to... lots of things. People, other people's experiences, the environment, just be receptive and really listen to it. Listen to what has happened before. And I think that means you can't be absolutely set in your ideas. But conversely, you know you can't vacillate. Round and round, you

know you'll never make a decision".| "So how to develop it if you are sufficiently open to it, you have to be receptive, to some extent that's an inherent thing. I'm not sure that you can be taught that. I don't know, maybe you can. But if you are open to it…it will develop of itself, I think." [The dawning and development of intuitive intelligence?]

Question: Do you think this is an ability which top executives should have compared to other levels? [If so, why?]

Purposive 2: "I think it's very obvious with successful companies that there are people that intuitively - that are in tune with their intuition. And you can see they are closer to making better decisions more often than those that are sitting there saying 'let's wait for the data'. And also that ability to recognise – because it's two things. It's a double edged sword that. The one is to make the decision, and two - recognise that the decision that you're making could have ramifications [consequences], and to know…to know when to check those things."

[How to develop it?]

Purposive 2: "And it's in this model, so if I've made an intuitive decision, there's something and I go down and find that little missing piece actually means I should go back and change that decision, I must be prepared for that. This is not like a game of cards. And to me what is vitally important about intuitive decisions. It's not a game of cards."

Question: Do you think this is an ability which top executives should have compared to other levels? [If so, why?]

P1: "Over time, you've made lots of decisions. You've done some right decisions, and you've done some wrong ones. Hopefully you've learnt, so that's why they get less and less. Or wrong, or less wrong."

[How to develop it?]

P1:"Because you know if you sort of ..if you monitor it, you can re-engineer the thing on the way. I'm not gonna say I didn't make the right decision, I'll just say that - the original path was probably …could have been better planned". | "It's strategic thinking – If you make a long term decision – What's the strategy of your business, what is your thinking."

Question: Do you think this is an ability which top executives should have compared to other levels? [If so, why?]

P2: "So I have to bring those in and balance them and think about them, and in some cases I have to reason, and think it makes sense. In other cases I think you just got to pander to them, but not do it. I'm slowly but surely getting to a sense of what I think will work. But it's the same basic thing."

[How to develop II]

P2: "Try and get all the facts, try and test things that you don't know as facts, but impressions, you know - information you've got that you don't know as factual. By testing it, you can't necessarily test it for factual veracity but you check it by reference to either a framework, or a paradigm or a person. Who's judgement you know from experience, not to be good necessarily but to understand why they will give a good judgement."

Question: Do you think this is an ability which top executives should have compared to other levels? [If so, why?]

P3: "I have to say, it's not something that I can at eight o' clock in the morning, say switch on. It's one of those things that come to me at strange times. And I don't necessarily have control over when I can or cannot have it. But I certainly ....that was a classic example of where I outlined a transaction on the white board in my office back in 2006, probably around about half an hour. Which then became the basis of the very successful transaction that we consummated. So -and in fact that was my first deal that I did on becoming CEO. And so for me I'm very proud of that. And certainly that was a classic case of just gut instinct and the whole works just working for me."

[How to develop II]

Question: Do you think this (Intuitive Intelligence) is an ability which top executives should have compared to other levels? [If so, why?]

P4: "People's cognitive abilities, and cognitive competence and whatever. And you know whether ...people can take short term or long term decisions

right or whatever. Experience must shape ...experience, intuition, must shape. Er, you know, if you're running a big corporate or running the country or running you know, some NGO, or something, where the decisions you take are going to manifest down the track. A fair bit down the track. You need somebody, somebody who I think is, for want of a better word, plugged in to the external environment. Or more aware of the external environment, more cognitive, what's the word, all that kind of thing. And there are others that – you know just can't be bothered, you know. To them, the day to day is as complicated as they're willing to think about life".

[How to develop II?]

P4: "The world economy won't, you know shudder and shake as a result of Greece going bust. That's all the hard line analytical things. But markets don't often work with lots of gut feel and intuition and contrarian views and whatever. So if you had to pin me down as a final word yes or no as to should, I think ...yes...you should have it. It's like politicians I guess, they should have an instinct for what they're doing, and that maybe why the world is in such a mess. We've got too many intuitive people out there playing to the gallery. I mean I've got no doubt that the coldest, most analytical, least call it intuitive style of manager - I'm not sure would have taken many decisions that differently at that point. It's I think then, it's how you modify the decision, having got into it, might have an impact there."

Question: Do you think this is an ability which top executives should have compared to other levels? [If so, why?]

P5: "Hundred percent. Hundred percent. One hundred percent.' [Differentiator]. *'Most people at a senior level cannot do it. And you'll see a CEO who does this naturally in his sleep. They've just got this ability to hone in - with all this noise - [on] what's important."*

[How to develop II]

P5: "Yeah. It does require specialist knowledge in the field, whatever that field might be. Then once you have that specialist skill, then you're able to discern the critical factors."

Question: Do you think this is an ability which top executives should have compared to other levels? [If so, why?]

P6: "Oh, good Lord, I've always said – so apart from all the rational work that you do, the more time you spend with people in their environments, in different circumstances, the more you expose yourself therefore to different things – all of those experiences, enable you to make better judgements about life, and preferably hopefully about business as well" | "It means that I don't only make decisions based on fact –based stuff that sits before me. I look just over the past number of years."

[How to develop II]

P6: "So it's not about intelligence as in intellect, as about the ability to learn. [Continual learning*] In other words to absorb* [conscious effort] *that which is different and new, to enhance your ability to succeed. Does that make sense?"*

Question: Do you think this is an ability which top executives should have compared to other levels? [If so, why?]

P7: "Because they've got a fundamental understanding of the business which they're in,' [Awareness of the quality of the decision. Knows when to play the analytical hand, and when to be intuitive], *'cos then being analytical just… '…messes you up.'"*

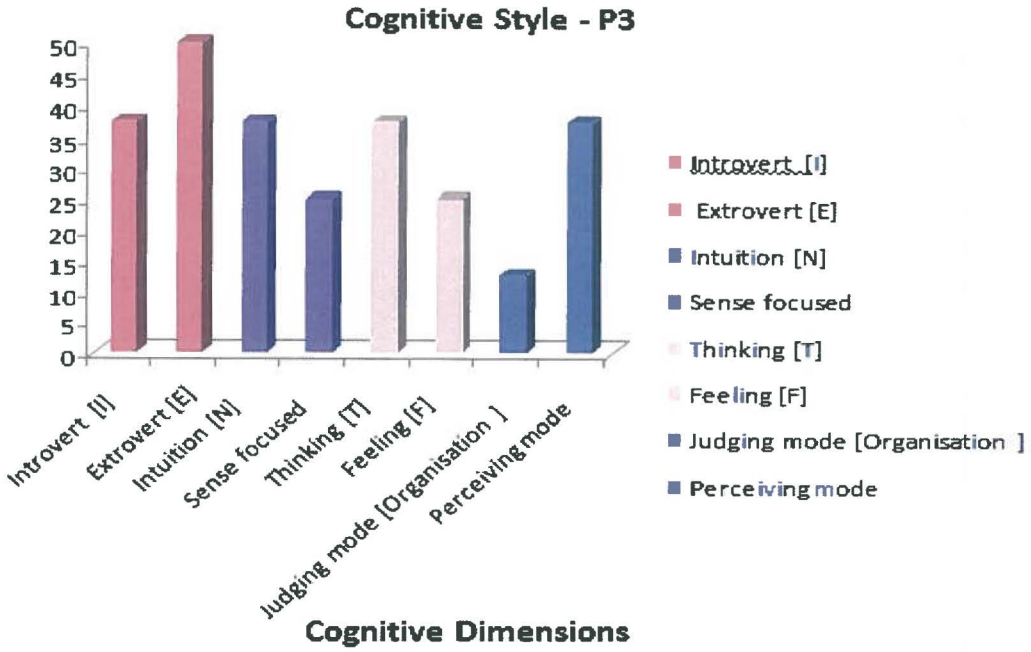
[How to develop II]

P7: "Spend time. [Conscious effort]. *Understand your business.* [Conscious effort]. *Think about it all the time.* [Conscious effort]. *Think about what can go wrong. Think about what the upsides are, think about where the competitive position is, and spend time; experience. Lot's people say 'you gotta mess it up to learn' I say it a bit different[ly]. I say you don't learn from success, you learn from failure, but preferably the failure of others. So I love reading stories about failures – you know you read 'Harvard Business Review."| "Well, it just keeps me in the game – it keeps me valued by the others. And it keeps me effective. It keeps my business successful. And you can't stay in these jobs one year longer than you should. I mean you'll get*

skopped out, man. They'll get somebody else".| "By talking to people, by listening to what they have to say. Ja, no, it's all about reading, listening. Thinking. I mean you think the whole time. Even when I'm sleeping - I keep a notepad nearby. I'm embarrassed to tell you, I keep a notepad - I write stuff down. I get up and I write stuff down. Then I go back to sleep. Even on holidays I do it. It's not a holiday thing." [Conscious effort, learning, listening, contextualising. Seeing his effectiveness working for him]

- ***CSI Results in determining*** **if there are characteristics of the 'ideal intuitively intelligent' leader [descriptions of the prototype exemplar].**

Eight leaders participated in a separate cognitive style inventory [CSI]. (Robbins & Hunsaker, 2009). One declined, preferring not to. The CSI evaluated leaders' cognitive characteristics at a particular point in time, and provided another angle of insight as to the leaders' inward workings (Glaser, 1995). The eight characteristics were mapped against four cognitive dimensions: energy focus, information perceiving, information processing, and decision making.



Cognitive Dimension	Introvert [I]	Extrovert [E]	Intuition [N]	Sense focused [S]	Thinking [T]	Feeling [F]	Judging [J]	Perc-eiving [P]
	37.5	50	37.5	25	37.5	25	12.5	37.5

Fig 5.8: Typical analysis of a Cognitive Style Inventory

In terms of CSI results, participating leaders were given feedback on their cognitive style inventory. Their feedback in terms of the value this provided was positive, in terms of good alignment with the way they normally 'operated', and with the patterns shown up in the CSI. Consolidated results are shown in Figure 5.9. One leader declined to participate on the grounds of competitor threat. Three leaders were ENTP, two were ENFP, the remainder of the eight were each ENTP/J; E/INT/FP, INTJ respectively. The common factor of note was that all displayed high levels of intuitiveness [N].

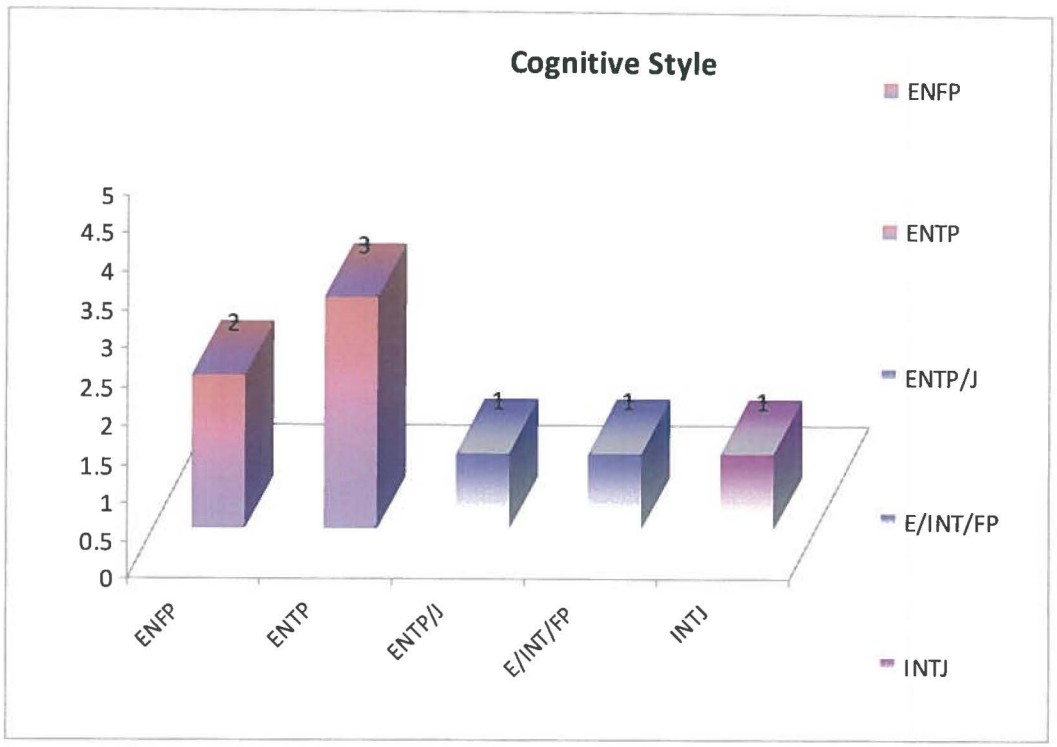


Fig 5.9 Prevalent Cognitive Styles

- **Discussion**

In this study, senior executives using intuitive decision making were defined as those that scored high on the intuitive measure, with effective decisions indicative of the Intuitive Intelligence therein. It is important to note that because leaders may test as having a personal characteristic, it does not mean that the said characteristic will dominate their behaviour at all times. However, the CSI did provide key information in relation to cognitive preferences and tendencies.

The key indicators displayed are: Extrovert or External energy focus (E), Introvert or Internal energy focus (I), Sensing (S), Intuiting (N), Thinking (T), Feeling (F), Judging (J), and Perceiving (P). The results of these cognitive modes or categories in terms of assessing participants' style of functioning, show up very interesting patterns. Not the least of which is the central core common to all types – Intuition (N). Couple this with the prevalent 'Perceiving', [P], which maintains the leaders scanning of incoming information, and the ground appears to be paved for a powerful Intuitive Intelligence mix.

The one contradiction to this is P5, where the result was INTJ. This might be down to a dynamic to appear hardcore business minded. However, P5's later response to individual changes in decision making style over the years was that it became 'more intuitive' Again, this apparent contradiction may be indicative of the leader's perception that intuitive decision making in the real world might be problematic (Miller & Ireland, 2005).

Table 5.7 Measurement of Intuitive Cognitive Style

E – Extrovert: Energy external; prefers contact with others and things.	I – Introvert: Self contained, works things out personally.
S – Sensing: Perceiving info-concrete info, facts, details	**N – Intuition: Perceiving as a whole, focus on possibilities, imagination.**
T- Thinking: Emphasis on analysis, logic.	F – Feeling: Focus on human values, beliefs, personal connectedness with others. Decisions on likes and dislikes. [The image theory link, bias/ prejudice, and how this can cloud intuition]
J – Judging: Preference for structure, order [push for decision-making closure]	P- Perceiving: Preference for receiving, perceiving, processing as much info as possible. ["Getting a sense of the thing" prior to deciding]

Adapted from Robbins & Hunsaker (2009: 34)

The above Cognitive style measure by Robbins & Hunsaker, (2009), is based on the Myers-Briggs Type Indicator which is used to determine cognitive and intuitive information perceiving, processing and style of functioning. When sharing the results with leaders it was important to emphasise that the assessment results were not be viewed in isolation, but in relation to personality and preference related measures. However, the Cognitive style inventory proved useful in the context of the study for comparative purposes. For example, the information processing link may well be valid in terms of how Intuitive Intelligence manifests especially when the (Phase One) results show the importance of 'information processing', albeit at a "'*...level which the individual may not be aware of,* '" (Robbins & Hunsaker, 2009: 34). In terms of study results therefore, as well as in extant literature, there appears to be support for the development of Intuitive Intelligence as follows:

- Gardner (1996), points out that intelligence and information processing mechanisms relate to that which is *activated by certain internal or external information. Gardner, et al., (1996: 204).*
- Gladwell (2005) suggests that intuition bypasses the usual thinking pathways to perceive the solution or action or decision to be taken.
- The concept of analysis-paralysis used by Agor (1989) is the very opposite of the concept of intuitive thin-slicing by Gladwell (2005), where too much thinking appears to render the decision maker ineffective rather than effective.

In terms of study results all nine leaders appeared to display characteristics of the intuitively intelligent leader, particularly in their decision-making modes. For example, in terms of characteristics and core competencies of intuitively intelligent leaders, the overall responses from both CSI and interviews were illuminating. The leaders, (Purposive 1 to P6), pinpoint remaining receptive to new information, *'exposing oneself to new experiences'*, and learning. It appears that a fair degree of conscious effort is invested in and pushed for, by the leaders.

The ability link comes through in terms of *'knowing' just when to look 'past the facts, drawing on one's experience'*; and *'when to be analytical'*| (P6; P7).

- **Observation**

When it came to describing the certain aspects of the intuitive domain, leaders did appear overtly to struggle for words – sometimes ending up just saying – 'I don't know'. Why this was a noteworthy observation, was that for the remainder of the time, all of the leaders were extremely communicative with extremely high verbal skills. A possible explanation for this is offered by Barnard, (1938), where *"'...intuition may be seen as opposed to logic, and where intuitive folk may mistakenly be perceived as inarticulate, but may remain one of the brainiest, and most capable men...'"* Barnard (1938: 15). At this exploratory stage of the research, one can only postulate that a similar mechanism applies when attempting to describe the inner workings of an intuitive intelligent mix.

In evaluating the results from this study, evidence shows that leaders freely acknowledged characteristics and core competencies in terms of intuitively intelligent decision makers. They also appear to come to a realisation that there might be a difference in their using of intuition per se, as opposed to a 'something else'- what the study terms - Intuitive Intelligence. *'So if I've made an intuitive decision, there's something ...and I go down and find that little missing piece actually means I should go back and change that decision, I must be prepared for that.'* [Whereas intuition per se, might go along with the original decision; therein is the difference from Intuitive Intelligence – the power of the present appears always to be given precedence in intelligence work – whereas in intuition, present incoming information is made subservient to past biases- [negative intuition].

Rowan (1987) conveys this subtle difference between the two constructs in terms of *balance*. Eugene Jennings, Michigan State University business school professor, says: "When an intuitive leader's head and heart don't agree, he'll go back to the drawing board..."', but less *balanced* executives

tend to coerce the facts to fit their feelings..." Rowan, (1987: 24). From the results thus far, there appears support for the study postulate that an Intuitive Intelligence mix may well act as the balancer in such cases. Other characteristics and core competencies emerge as follows:

- Awareness: recurring theme - intrapersonal *'I'm slowly but surely getting to a sense of what I think will work'*. Awareness also of the quality of the decision.
- Meta - Awareness and foresight component to awareness: Knows when to play the analytical hand, and when to be intuitive. It is possible that foresight might belong to this component.
- Tests – reality check [Verification] using trusted peer or paradigm *'... try and test things that you don't know as facts, but impressions....'*
- Open, receptive to the [II] process, unfolding developments. The adaptive component of the intelligence.
- No control over the illumination part of the process, but recognises it and is open to its promptings when it does occur. This sense of being a willing participant to the process rather than a controller of the process is acknowledged.
- Calm, self-assured, 'balanced'. These are leaders who portray a seasoned confidence and a calm assurance that things 'will work'.
- Knack of timing. These leaders appear to have an uncanny knack of timing and an overall appreciation of timeframes and constraints. Thus characteristics of intuitively intelligent exemplars appear to exist and thrive in uncertain, ambiguous and complex situations.

- **Conclusion**

The above results and that of findings in literature on abilities of intuitive decision makers, is strongly aligned, as shown in Table 5.8

Table 5.8 Comparison of characteristics of decision makers when using intuition and using Intuitive Intelligence.

Literature	Research	Evaluation
Sees beyond limitations and constraints to the **possibilities**. Easily 'off on another idea'.	Sees beyond limitations and constraints to the **possibilities, and the opportunities**. (Note the link to foresight]. Aware of the risks and consequences.	Aligned. Both find it difficult to see laborious step by step through in a project.
Inspires others with innovations	Inspires others with vision, ideas, and innovations.	Aligned. Both bored with old problems
Works in bursts of energy. Consistency a problem	Works in bursts of energy, or consistent pace – whichever is required.	Difference between the two types. Leader e.g. (P3) highlights best work is done when alone (on a plane).

However, jumps to conclusions. Dislikes time taken to be precise.	Often sees the solution to a problem as a whole (blink).	Aligned. Same holistic information processing occurs. *This is where there is a difference as the intuitively intelligent leader's awareness cues him/her that reality checks are crucial].*
Follow their inspirations	Follow their inspirations (with reality check reference) to organisational values, beliefs, as well as the link to personal moral beliefs – Burke & Miller, 1999).	*Note the differences in the ethical decision making process between the intuitive and the intuitively intelligent.*

Adapted from Robbins & Hunsaker (2009: 35)

In terms of further differentiation between intuition and Intuitive Intelligence, an observation is that the intuitively intelligent appears to be constantly 'plugged in' to the intra and inter – personal, the macro and the micro environment, and an overriding observation is that their antennae appear to be constantly scanning the landscape, but also that they appear to be

'plugged in' on an intra and interpersonal level - such seems to be the multi-layered capacity for awareness.

5.7.7. Research Objective 7

To identify the role (if any), of Intuitive Intelligence in leadership strategic decision making.

Question:

What role if any, does this same ability play in your senior executive function. [Does it make any difference at all]?

- **Results**

Purposive 1: "I think, I would say, intuition is totally internal, real gut feel, it's using your own senses, etc. Intuitive Intelligence, I think is, you may not actually agree with it, but that is part of the bigger picture. So it's not what you necessarily bring to the table, but it's what you're reading from what else has been brought to the table. And I think that's maybe where people aren't necessarily alive to that, very often. So maybe there is recognition that there is greater value in Intuitive Intelligence than intuition because, gut feel or intuition is really difficult to justify or rationalise. Whereas Intuitive Intelligence to some extent you can rationalise; from behaviours; from looking at it in conjunction with data; it's a distilling of what is available, as opposed to just a sense of something. It's sort of something more external and internal."

[That response from Purposive 1 was an inspired one, and all the other responses are more or less reflections of this one spontaneous response.]

Purposive 2: "Whereas intuition is, this doesn't feel right; I'm not sure why, it's almost an emotional response. Intuitive Intelligence in my mind is more based on past experiences that are giving me a collective- sort of 'this type of project has that outcome or potentially that outcome attached to it".|
"We have a saying in this business unit that 'if it looks too good to be true, then it is too good to be true'. And that's more intuition okay, in it. But by

the same token, I know when those returns look unrealistic [laughs], there is a problem behind it. Someone's missed something. And that I suppose will be intuit- Intuitive Intelligence. Ja, that's the way I look at it."

P1: "I wouldn't know. Because I wouldn't know why everybody can't apply it. But it's probably some form of…. I think it's rational thinking. When you make a decision you make a rational thought process. You know the new thing that's come about your decision making and you can actually be tested on it. I'm not so sure why it's come about?"

P2: "And it's partly due to training as well. The problem is that people are lazy, lazy, lazy or just intellectually lazy; try to avoid an argument by saying my gut feel is this. And then you say then, well, why? I've done this by asking why a few times. You actually get to find out why. It's not just a gut feeling, they actually have some insight. And then you can unpick that insight and see where you agree with it or accept it. Are they prepared to back their judgement?"

P3: "I think there is some intelligence, 'cos quite clearly - as I said, I think there is like a loop. So each time you go through an iteration, you actually learn from that iteration which shows that I think there is intelligence taking place, and it becomes more perfected as we grow. So, ja, without a doubt. I think it grows from two points of view – IQ and EQ. I think it grows from an EQ point of view –if you learn how to work the people aspects into your intuition a lot better. And at the same time, because you're perfecting the system, each time you go through the iterative loops. I think you also are improving on the intelligence aspects as well."

P4: "...I think as your knowledge base increases, as an individual, the way you then handle that knowledge and take decisions is probably intuition almost. [Laughs] [As if in realisation] Might be - if you've got more facts or the more experience at your fingertips it will shape how you take decisions, and to the extent there is intuitive input, that grows, I think along with it."

P5: "It definitely does, but it does not necessarily show signs of academic intelligence. So if you think of some of the best business people in the world. They tend to be extremely street smart as opposed to academic. So, it also shows creativity. Street smart, creativity, that sort of thing". | *"Yeah I suffer from that disease (laughter) If I think of the great business men that I know – these guys are not polished. Street-smart guys have got [the] EQ of a doorknob. (laughter). Maybe creative yes – I'm not sure about intuitiveness"* [The ambivalence comes through] | *"It's not one dimensional – can't be one dimensional. But I wouldn't be able to tell you what the dimensions are".*| *"So you see the sponge - so you're not realising that the sponge has all the cells soaked up, and some of the learning and the institutional memory is sitting in the sponge."*

P6: "Now you've got to have to learn to do that. So it's not about intelligence as in intellect, as about the ability to learn. In other words to absorb that which is different and new, to enhance your ability to succeed. Does that make sense?." | *"It's an important role. And why do I say it's an important role? Because not all that we do is absolutely right up front, but similarly when I say that it is the most decisive role in the more complex organisations I've had to work with. The more complex my tasks have been; it's had to be a judicious blend between making sure that the rational analytical stuff is absolutely in place."* [The blended balance between the analytical and the intuitive] |. *"I think the more complex that has become the more important it has been for me to understand ...so I never let the intuitive side of me go."*

P7: "So I think it's that fundamental ingrained understanding of the environment in which you operate and your commercial decision-making ability. I know how to make money. I've always known how to make money. It's just something that happened, since I was a kid."

- **Discussion**

The above responses align with the leaders' CSI inventory results in that every single one of them acknowledges an intuitive role and active

presence in their decision making. Even the leader, who declined the CSI, acknowledges *never letting 'the intuitive side of me go'.*

From the above results, it appears that the more complex, the more ambiguous, the more contextually constrained, the situation facing the leader, the more his/her response is informed by an Intuitive Intelligence component. The judgement on hindsight being whether or not that response could be perceived as effective or not. But what informs the leaders' Intuitive Intelligence?

Leaders P4, and P6 felt that the riskier the situation, the less the intuitive component in the decision. So risk appears to be a red flag to the leader to check the intuitive component of his/her response. However, this may not necessarily mean a contradiction in terms of the study, i.e. a *decreased* Intuitive Intelligence component in the decision. As the results show, the Intuitive Intelligence mix is *informed* by the unique contextual considerations; those rational, analytical, psychological and emotional. Hence it might appear that as the Intuitive Intelligence component increases, the purely intuitive, 'uninformed' so to speak component of the decision, decreases. It might also be that, to the extent that the leader decreases that which is unknown, is the extent to which he exercises and increases his Intuitive Intelligence component. That remains in the realm of testing, however, beyond the scope of the current study.

- **Conclusion**

This study purported that there was a case to be made for Intuitive Intelligence, indicated in effective intuitive strategic decisions and evolving from the leaders' own baseline intuition.

One may reflect on Gardner's (1996) theory of multiple intelligences in respect of the findings of this study. These were discussed in (Chapter Three)

- Intuitive Intelligence behaves as an intelligence in terms of its ability to provide information in uncertain situations. This is confirmed by the study.
- Ability to process information on a subliminal level. Confirmed by the study - e.g. Objectives Three - Five.

- Decision making effectiveness is enhanced as intuition is developed into Intuitive Intelligence. Although confirmed by the study, empirical testing is required to determine to what degree.
- Linked to the CIA in Gardner's intrapersonal intelligence. Intuitive Intelligence manifests interpersonal awareness as part of its components. Again, confirmed at an exploratory level in the study.
- Linked to symbol systems in terms of intelligence where: 'a primary characteristic of human intelligence may well be its 'natural' gravitation toward embodiment in a symbolic system.' Confirmed and indicated in the leaders use of symbols, (graphics, pictures, symbols), and symbolic discourse to communicate, their message. Gardner *et al.,* (1993: 66).

Hence the findings in terms of the study would align to the Intuitive Intelligence forming part of the intelligences conceptualised broadly *"...only as potentially useful scientific constructs..."* Gardner *et.al., (1993: 70).* And notwithstanding the plethora of conceptualisations; *"Yet the possession of an intelligence is most accurately thought of as a potential..."* Gardner *et. al.,* (1993: 68). A potential which participants report as developing along with them; providing them with a competitive edge in their game.

Way back in 1987, Rowan pointed to the development capability of intuition when he said that intuition hailed from humble evolutionary beginnings such as instinct:

"But this amorphous, ill-defined instinct known as intuition has to be understood, nurtured, and trusted if it is to be turned into a powerful management tool." (Rowan, 1987: 15)

The evidence from this study certainly supports such a case. In terms of the potential of an intelligence, it is possible that intuition evolves into an Intuitive Intelligence fed by the leaders' own conscious efforts, awareness, EI, experience, knowledge, skills, active learning, resulting in the leaders' effective response. To explore this notion further:

- **Evolutionary beginnings of Intuitive Intelligence**

Taking Rowan's (1987) indication, and the research results into account, an evolutionary development for the construct of Intuitive Intelligence might, in terms of conceptual completion, look somewhat like this:

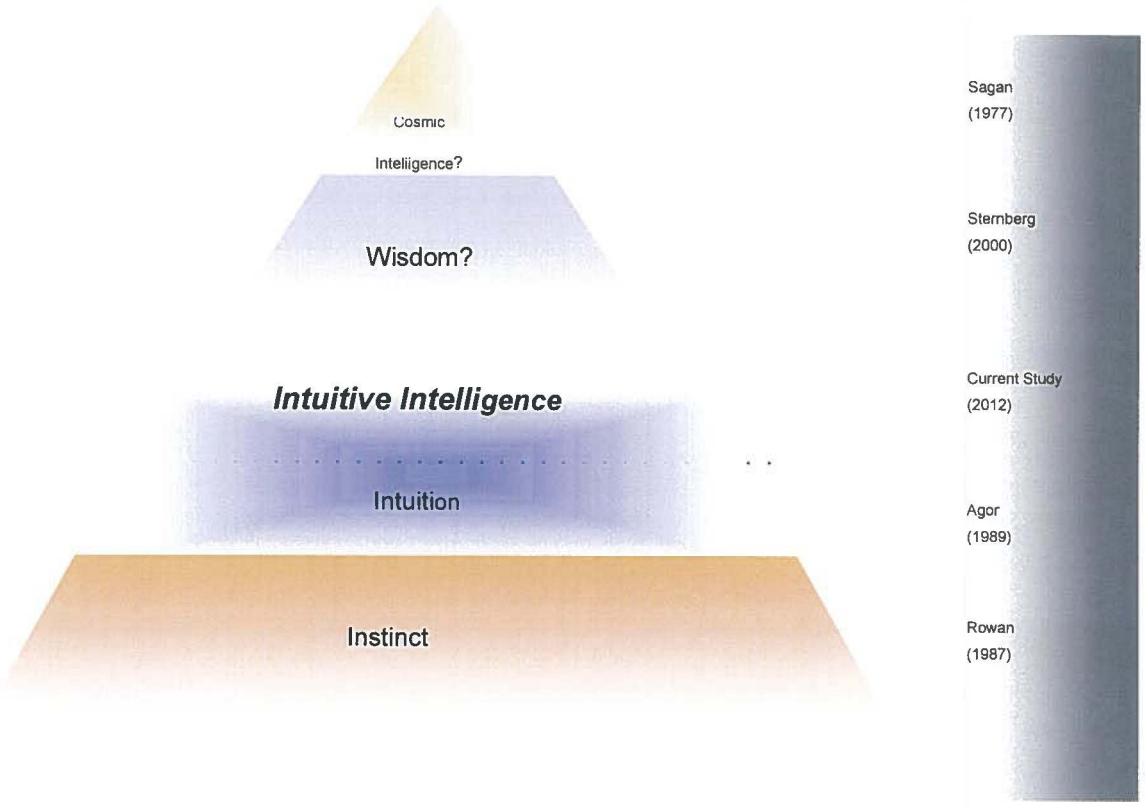


Fig 5.10: Evolutionary development of Intuitive Intelligence

The value of illustrating an evolutionary development in terms of Intuitive Intelligence means that just as the research identified ways to develop [II], so can barriers to the development of Intuitive Intelligence be highlighted and surmounted.

- **Barriers to Intuitive Intelligence development**

The four C's discussed in Crossan & Sorrenti (1997) are those factors that block an individual from risking improvisation or spontaneous ad hoc action in the workplace. Since intuition informs such action, these are thought to act synonymously in blocking development to Intuitive Intelligence as well; factors such as the desire to be competent, comfortable, consistent, confident.

- **Development of Intuitive Intelligence**

In terms of the development of [II] Rowan (1987), offers relevant advice:

- Acknowledgment of the baseline workings of intuition. Once this can be trusted, learnt from and nurtured; (taking the study results into consideration);

- Application of intuitive decision making, given the relevant context, awareness and effort.

- Acceptance. Which includes an inner acceptance that the answers to *"'...the toughest problems can leap fully conceived into our awareness - and at the most unpropitious moment, as happened to Archimedes in the bath.'"* (Rowan, 1987: 15) However, acceptance of such, can only occur once one has an understanding and a full appreciation of what such a construct is; which leads to the question of Research Objective Two revisited.

5.7.8 Research Objective Two revisited in the light of overall research results

- To derive an empirical based definition of Intuitive Intelligence.
- Can Intuitive Intelligence be empirically verified? [Based on empirical data, and the Research Objective Two mandate].

The previous six research objectives have mainly demonstrated the real world value and support for the existence and application of Intuitive Intelligence. What then does the Phase Two empirical definition of Intuitive Intelligence indicate? To answer this, two sources of data need to be examined.

- **Results - Comparison with Phase One definition**

To refresh the findings of Phase one: the seven key words (awareness, gut feel, decision making, experience, information processing, knowing, unconscious processing, were cross matched to the conceptualisation and criteria of multiple intelligences, such as performance, ability, and development (Emmons, 2000; Sternberg, 2001; Gardner, 1996).
The result led to the following theoretical definition of Intuitive Intelligence derived from Phase One of the current study.

'A construct based on intuition, which develops and manifests in the performance and ability of the individual; conceived as a form of knowing and holistic way of information processing, which enables the perception of immediate meaning and sense making not easily achieved by other means.'

Phase Two results (from Objective Three) can thus be compared to Phase One as follows:

Table 5.9 Comparison of results of Phase 1 and Phase 2

Phase One	Phase Two	Evaluation
'A construct based on intuition, which develops and manifests in the performance and ability of the individual; conceived as a form of knowing and holistic way of information processing, which enables a perception of immediate meaning and sense making not easily achieved by other means'.	**1. Experience.**	The highlighted words show the direct recurrence and link common to both to Phase 1 and 2. Foresight and Contextual understanding are indicative of the individual's perception of meaning and sense making in situations of uncertainty, complexity and incomplete information.
	2. Emotion (EI), Affect informed (Gut feeling)	
	3. Knowledge [and knowing]	
	4. Skills	
	5. Automatic / subconscious **information and mental processing**	
	6. Ethics link	
	7. Awareness (interpersonal, intrapersonal)	
	8. Intuition – base construct	
	9. Risk and consequence aware	
	10. Foresight- capacity to foresee events well in advance.	
	11. Continual Learning	
	12. Contextual sense making, including social cultural, political and economic on macro and micro levels.	
	13. Conscious effort on part of leader to keep up the above	

- **Discussion**

In term of the derived definition of Intuitive Intelligence, there is sufficient synergy of terminology to capture the definitive components of the construct. In terms of the study, the ability to make effective strategic decisions, albeit not stated explicitly in the definition per se, is a guiding assumption of the study itself, with the ability to make decisions taken as a *'fundamental dimension of intelligence'* Sternberg (2000: 217). The ability to make effective strategic decisions in the study is informed by the Intuitive Intelligence of the leader; which in turn manifests in performance and ability.

- **Conclusion**

Hence the above definition of Intuitive Intelligence can be accepted within the remit of the study.

5.8 Summary

Chapter Five explicated research analyses, results, discussion, evaluation and the conclusion in terms of the theoretical and empirical data sources. Chapter Six discusses integrated findings and conclusions of the study in relation to theoretical foundations.

CHAPTER SIX

INTEGRATED FINDINGS, CONCLUSIONS

6. 1 Introduction

This chapter reflects on the evidence and primary narrative extracted from Chapter Five, and integrates the relevant key themes and issues into research findings. The outcome is to clarify the positioning of Intuitive Intelligence within relevant theoretical frameworks, given the conceptual underpinning of complexity and uncertainty (Jones, 2004; Crossan & Sorenti, 1997). In keeping with interdisciplinary triangulation, the study findings and their fit are located within extant epistemological underpinnings. During this process, one was aware that in terms of the interpretivist stance, to interpret in itself was to read meaning out of meaning (Love, 2002). The epistemological framework of the study is shown below.

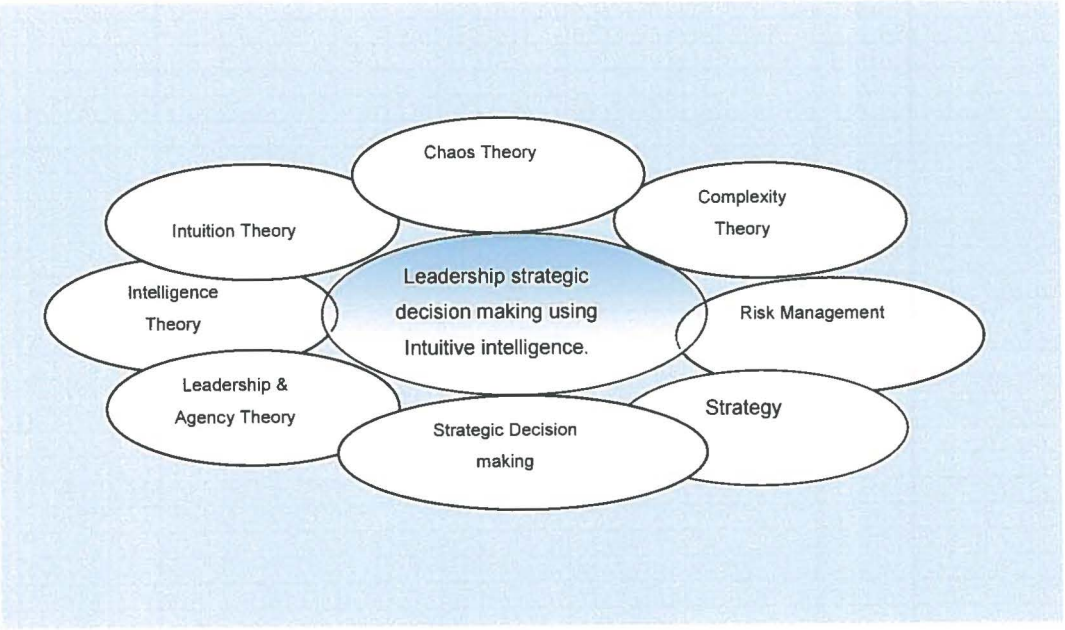


Fig 6.1 Epistemological framework explored in the study.

6.2. Integrated Findings

6.2.1 Integrated Finding One: Intuitive Intelligence, Complexity and Chaos Theory. Intuitive Intelligence is triggered by conditions of uncertainty, complexity, ambiguity and incomplete information.

A common contextual departure point of business complexity and chaos was applied to all leaders prior to their interviews. This set the scene for the discussion on strategic decision making to follow. The narrative distilled therefrom was that leaders defaulted to intuitive decision-making when called to respond in uncertain, complex, and incomplete information settings. Chapter Five detailed support for the role played by Intuitive Intelligence in effective decision making within such contexts. (Ref: Chapter Five). Further implications within the theoretical parameters of chaos and complexity theory (mandate of Chapter Six) are derived below.

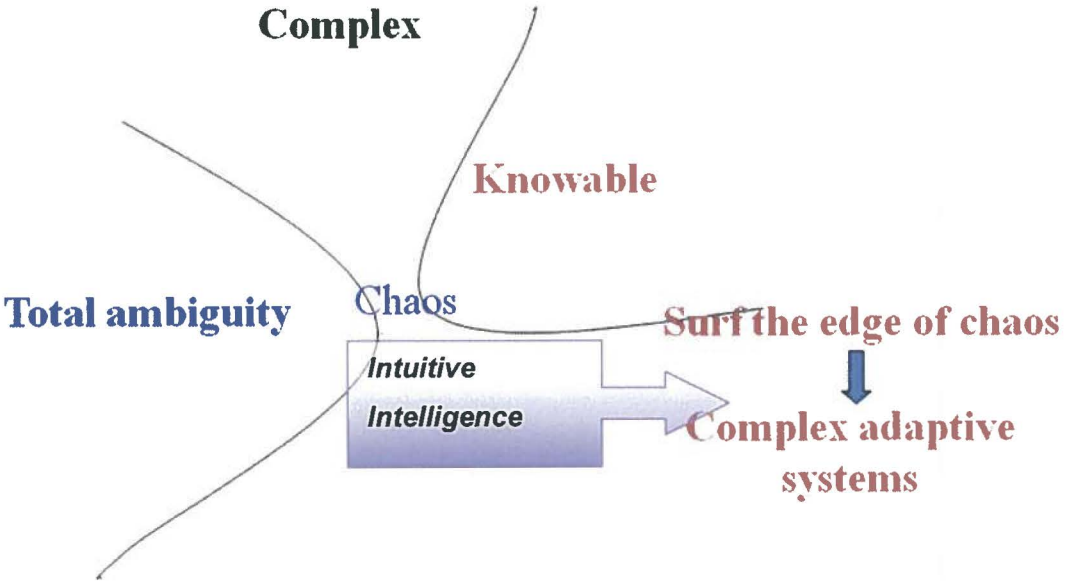


Fig 6.2 Chaos, Complexity and Intuitive Intelligence

Adapted from (Jones, 2004: 496)

Given that leaders grapple with a world of problems *"...uncertainty, complexity, turbulence and rapid change..."* (Jones, 2004: 504) the figure 6.2 reflects the Intuitive Intelligence fractal, almost as a microcosm within the workings of a complex adaptive system, where:

- Equilibrium poses risk and certain death to complex adaptive systems. Given that Intuitive Intelligence does not assert in the absence of complexity, and uncertainty, the leaders in the study responded within the context of risk, complexity and uncertainty. As an example, with reference to Chapter 5 (5.7.6), the leader responded with a mammoth strategic breakthrough which unbelievably took 'thirty minutes' to conceptualise. A response which set the organisation on a trajectory never previously mapped.

- Complex adaptive systems demonstrate intelligence in their self organisation, just as basic intuition can be stretched to develop into Intuitive Intelligence. Intuitive Intelligence works beneath the level of conscious awareness, surfacing as intuitive insights and 'aha' moments. As described in Chapter Five (5.7.6) – the participant slept with a notepad close by to capture such moments.

- Not all complex systems are adaptive. (Complex systems comprise of multiple levels of organisation, and structure, which generate organically and also wind down over time - entropy). The relevance is that not all leaders adapt their intuition to Intuitive Intelligence. Some make intuitive but ineffective decisions, posing a risk both to the leader and to the adaptation of the organisation. Leaders exercised their intuitive capacities to varying extents, where some consciously and continuously made an effort to develop their intuitive competencies into intelligence (Chapter Five: 5.7.3; 5.7.6)

- Complex adaptive systems are characterised by weak cause - effect linkages but which are nonetheless correlated (Pascale, 1999). Phase

transitions occur, and relatively small changes can cause huge effects, and vice versa. For example, misreading a contextual dynamic can end up being a deal breaker when negotiating a multinational deal. Particularly if the leader misses or misreads such cues (Chapter Five: 5.7.3).

Conclusion

Leaders who make sense of contextual cues, despite the ambiguity, invariably manage to steer their organisations through to complex adaptivity, as difficult though it may be to respond effectively in trying times (Segal – Horn, 2004). This study confirms how some leaders responded to such a call by making a quantum leap, and offers a characterisation of Intuitive Intelligence directly as a sense of *'something more'* (Pascale, 2004: 478). That which is triggered in times of dire straits; and it is a call which the leader ignores at organisational peril. Further along the theme of – there comes a time and a sense that something *more* is required, is the strategic drift Figure 6.3 in Finding Two.

6.2.2 Integrated Finding Two: When leaders are facing a situation of strategic drift; particularly in an adapt or die scenario, Intuitive Intelligence engenders new leadership responses.

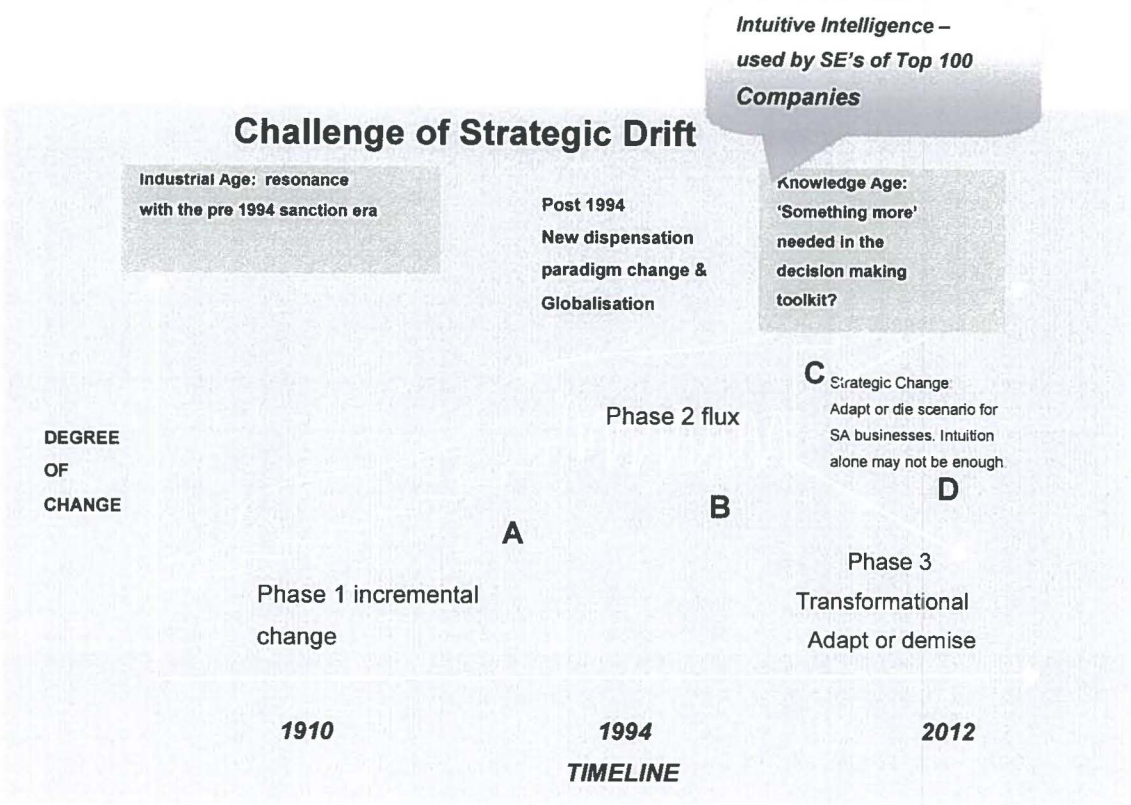


Fig 6.3 Strategic Drift and Intuitive Intelligence

Adapted from Johnson, (2004: 290)

Figure 6.3 shows the adapt or die scenario where Intuitive Intelligence plays an adaptive function in terms of the effective strategy deployed by the leader; on behalf of the organisation. In such times of unprecedented complexity and uncertainty, the call for new leadership response is a cue which triggers the type of adaptive Intuitive Intelligence to which this study speaks.

Jones (2004) has a compelling argument for the unfolding of such evolutionary leadership 'leaps' as illustrated in Figure 6.3. His assessment in terms of the timeline of strategic schools of thought shows the drive for new leadership approaches spawned from their time. The 'signs of the times' as it were, are indicative of the type of leadership response when faced with decreased levels of rationality, increasing complexity and

uncertainty. Decreased rationality in this context refers to contexts where linear logic was ineffectual in meeting the demands of new complex, uncertain environments. Responding effectively demanded new responses rather than the 'tried and tested'. This was necessary, as strategy by leaders' own admissions, was no longer linear (Chapter Five: 5.7.6).

Conclusion

Listening to some of the leaders who made breakthroughs, their intuitive capacities certainly played a role, again albeit through the leader's own efforts to consciously and continuously develop their intuitive competencies into intelligence.

6.2.3 Integrated Finding Three: Contexts of non - linearity in terms of strategy, is likely to provide the exposure necessary for the development of Intuitive Intelligence

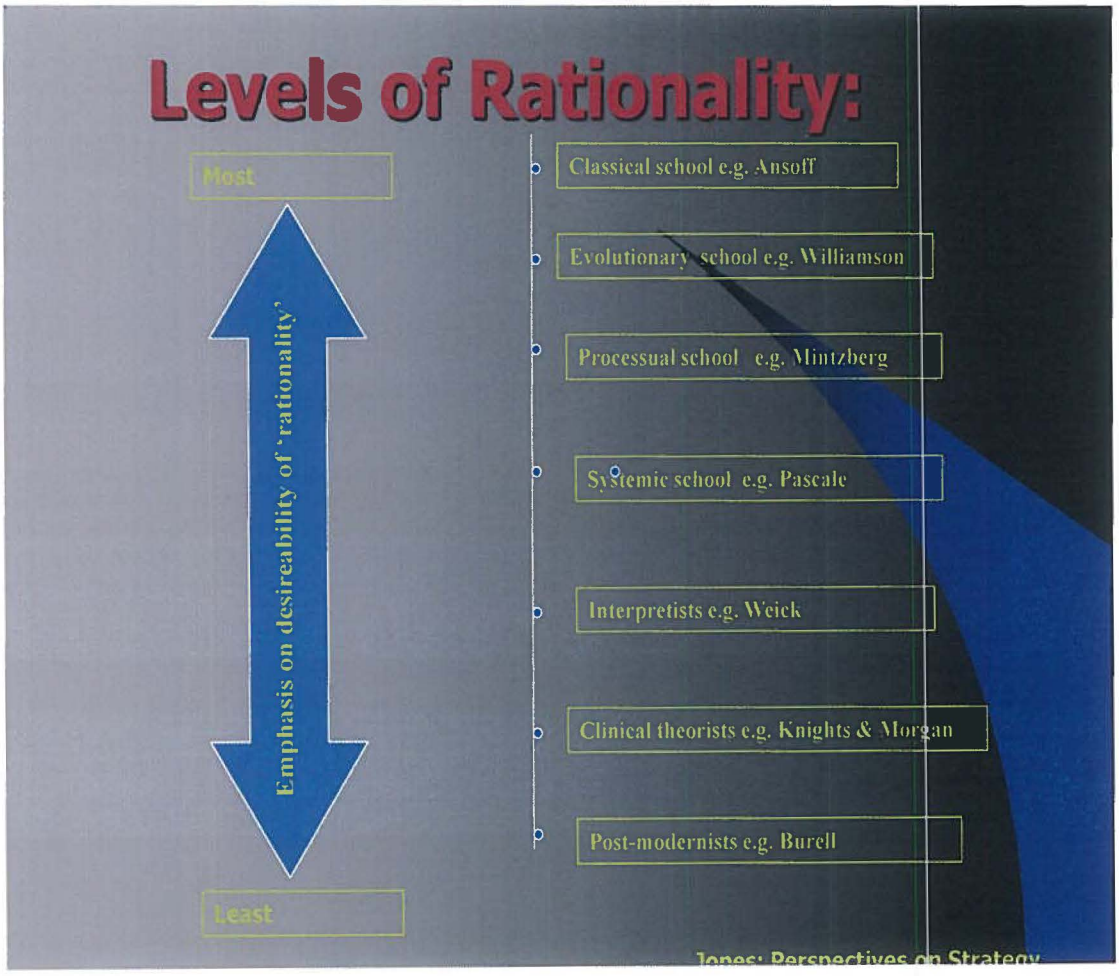


Fig 6.4 Non - linearity of Strategy

Jones, (2004: 505)

Taking the above levels of non linearity in terms of strategy, if one were to extend the timelines from current to beyond, the scenario might look something like Figure 6.5.

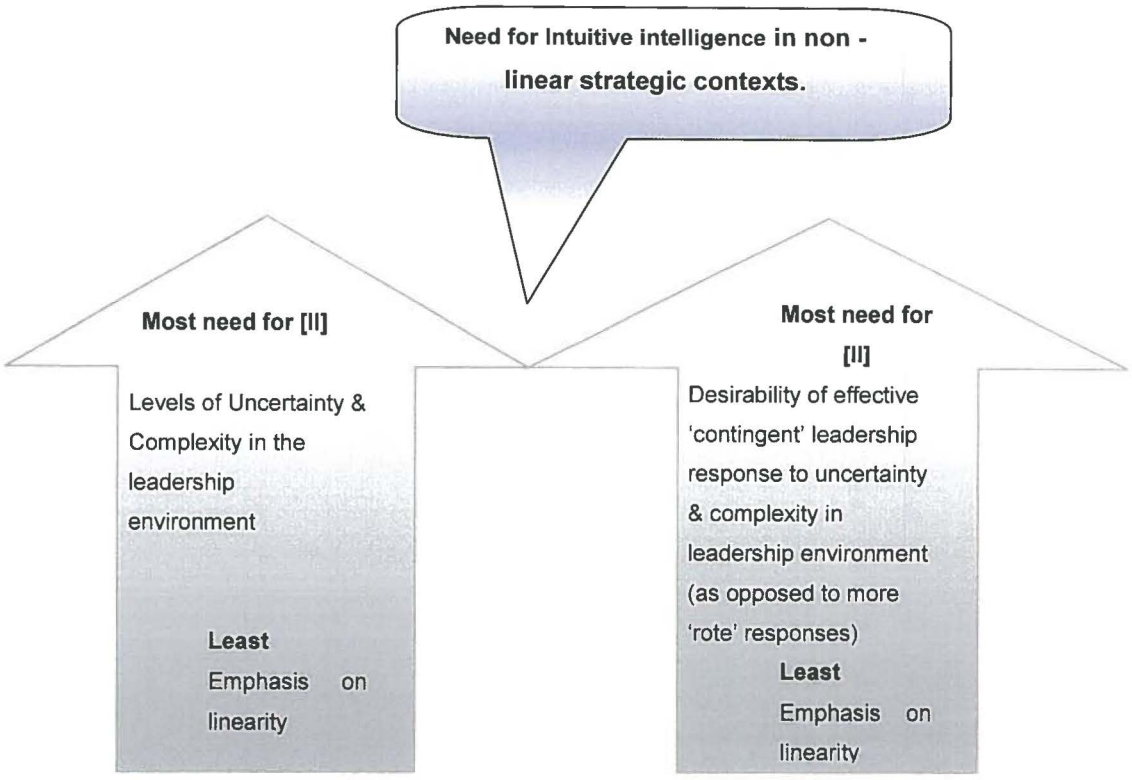


Fig 6.5 Inverse relationship between 'levels of linearity in strategy' (rationality) and levels of uncertainty and complexity in leadership environment and need for Intuitive Intelligence.

Adapted from Jones (2004: 505).

Moreover, when one juxtaposes the evolution of strategic thought with the contextual need for decision making abilities given a weak cause– effect [non-linear] strategic context, then Intuitive Intelligence might be one of those decision making tools which offer leverage. This was highlighted in the field by leaders acknowledging that they regularly faced non-linear strategic situations. Furthermore, Intuitive Intelligence was recognised as playing a positive role in their effective strategic decision making [Chapter Five: Research Objective 7).

Conclusion

Non - linearity, in strategic contexts, grants intuitive intelligence the exposure necessary for development; with the goal of the latter being effective strategic outcomes. These are goals which are related to organisational growth, profitability, and risk reduction (Whittington, *et al.*, 2002). This leads to Integrated Finding Four.

6.2.4 Integrated Finding Four: Intuitive Intelligence considers risk and consequence as an integral component in strategic decision making.

Leaders spoke of examples of risk scenarios aligned to those identified by Whittington *et al.,* (2002: 382); with reference to risk management theory where various types of risks needed to be identified and managed. Hence leaders need to respond on cue (Ray, 2005) to the following:

:

- Macro-economic risk – outside the organisation's control, such as wars, natural disasters, wage rates, interest rates, commodity prices, and related systemic risks.
- Political risks – e.g. governmental posed risks and threats e.g. nationalisation, affecting exchange rates of a local currency.
- Competitive risks - uncertainties in competitor response to organisation's strategies. Technological risk poses a related threat, as part of a competitor response may be to adopt advanced technology.
- Resource risks – where the organisation is unable to acquire, spare, or leverage resources. Key people skills and talent, being one of them.

With the basic premise of risk management theory being that these types of risks need to be identified, and managed.

Conclusion

In the context of the research study, risk is a challenge to the senior executive, and a variable which impacts heavily on resultant strategic decisions. Simons (1987) described decision premises which may come from a value or a factual base. Top management speak directly to this aspect, when they shape organisational purpose and establish the discretion afforded to its members to specify the risks which the organisation is averse to, or may have an appetite for. What is noteworthy is that all the above considerations involve a dynamic management of risk often beyond the leader's control; and over a particular timeline when gearing up Intuitive Intelligence for action. This leads to Integrated Finding Five.

6.2.5 Integrated Finding Five: Use of intuitive inputs in strategic decision-making is acknowledged by leaders; support exists for its distillation into Intuitive Intelligence and the role played thereby in effective decision-making. Thirteen components of Intuitive Intelligence are: conscious effort, learning, experience (and exposure), awareness, knowledge, skills, intuition, contextual sense making, risk-reward-consequence, foresight, emotion (and emotional intelligence), info-processing (auto and subconscious), and ethical (values) inputs.

Fig 6.6 illustrating the Intuitive Intelligence composite

Figure 6.6 depicts the micro contextual components of a strategic decision using Intuitive Intelligence, as indicated by the study.

6.2.6 Integrated Finding Six: Leaders require foresight (a key component of Intuitive Intelligence), when facing challenges within the context of uncertainty, in terms of their strategic responses.

When leaders spoke of timelines and decision making deadlines, the constant pressure in the face of risks and uncertainty, was to make decisions under time constraints and performance pressure, and have these turn out effectively for the organisation (as in Chapter Five: Research Objective One - Three). Timing of strategic response was important, and part of that consideration was the exercising of *foresight*.

The fit and flow between the external challenges from the environment; internal challenges from within the organisation, (Mintzberg, 1994; Mintzberg & Waters, 1990), and what strategic responses senior management choose, definitely informs and is informed by foresight, (to leaders - the intuitive ability to anticipate future events and scenarios) which in turn is shaped by a constant scanning of the external and internal environment as seen in Figure 6.7.

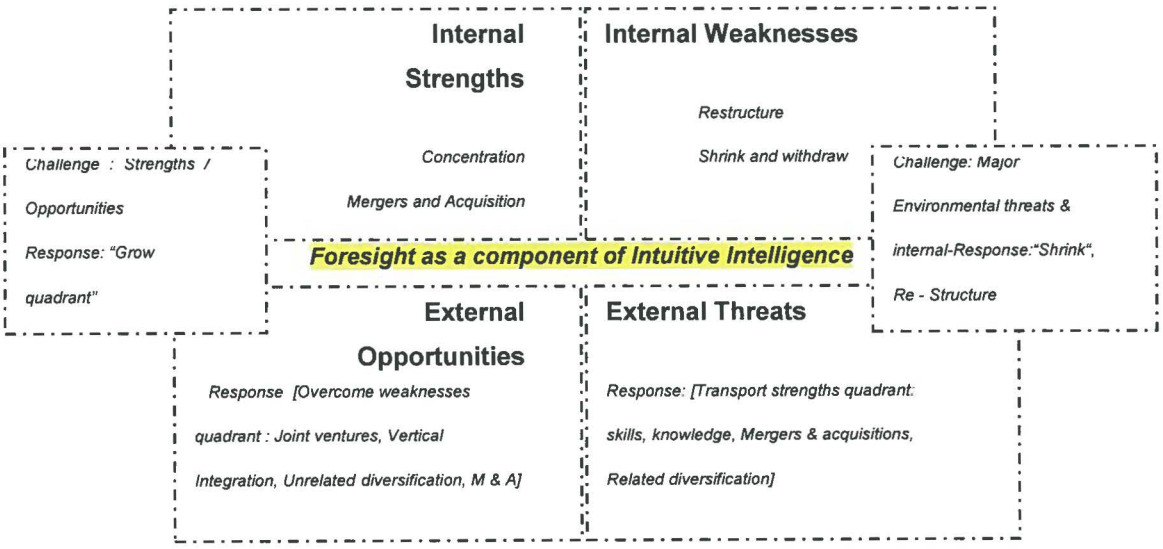


Fig 6.7 Macro challenges and leader response.

Adapted from Stahl & Grigsby (1991: 47)

Foresight is shown in context to the internal and external challenges faced by leaders, when exercising options in terms of strategic choices and responses. *"Strategic behaviour, in other words, is a systematic attempt to*

shape the future in a coherent way..." (Whittington, *et al.,* 2002: 422; Araujo & Easton, 1996). In terms of findings, foresight was integral to the Intuitive Intelligence composite when leaders faced high risks, high uncertainty, internal weaknesses and external threats. In their effective decisions, they were able to 'envision' (Chapter Five, Research Objective Three), to leverage their competitive advantage.

Whittington, *et al.,* (2002), reflect that when strategies change, they do so 'without schedule', and that when they do, the process can be '*complex*', and less than coherent. Whittington, *et al.*, (2002: 44). All this is left to the leader to deal with, as they shape, over time, "'*...strategy as a stream of goal directed activity...*'" (Jarzabkowski, 2005:173). Mintzberg (1987) proposed a view of strategy which allowed for the dimension of an uncertain future to be factored in. He called the resultant strategy – '*emergent*' (Stahl & Grigsby, 1991: 162) as illustrated in Figure 6.8.

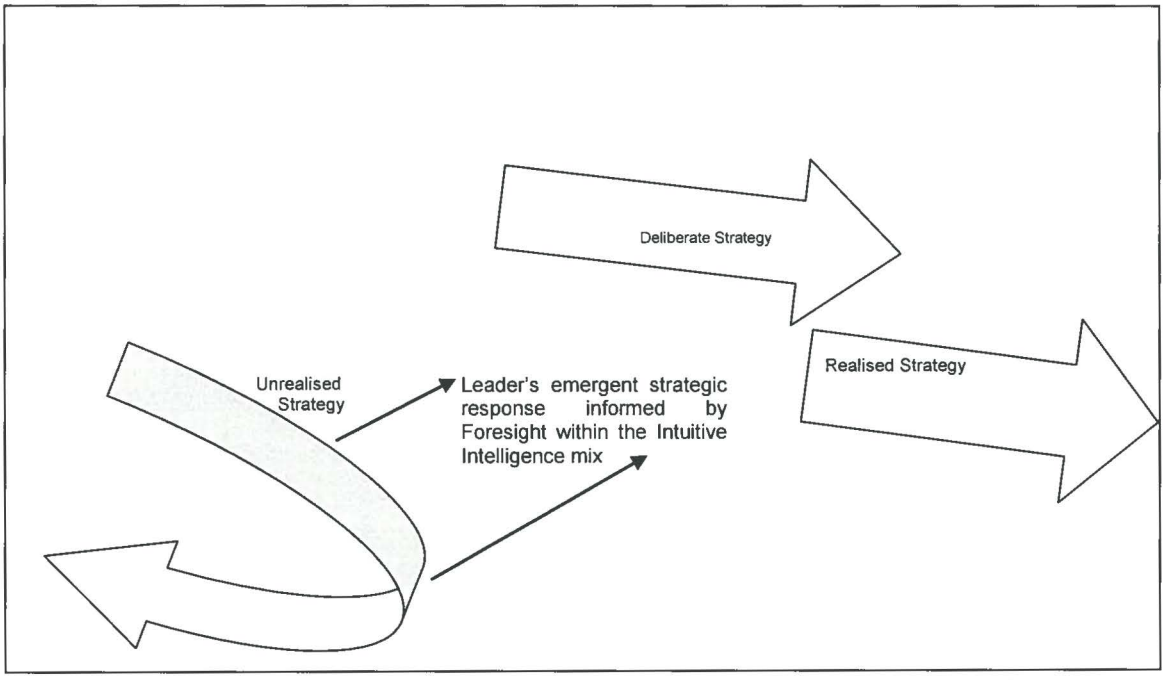


Fig 6.8 Emergent strategy in response to the challenges posed by an uncertain future.

Adapted from Stahl & Grigsby(1991: 162); Mintzberg (1987)

To reinforce the emergent nature of strategy as shown in Figure 6.8, Whittington, *et al.*, (2002) point to the shortcoming that generic explanations

of strategy do not account for the organisational context, timing, personalities, and situatedness (Whittington, *et al.*, 2002). This view is supported by the study whereby senior executives confirmed the crucial role of contextual situatedness, in informing their insights, and further, their foresight. Hence the positive role of Intuitive Intelligence in their strategic responses.

"Senior executives in a firm are not only the decision-makers and actors in the strategy process, they are also the architects and managers of the organisational context that shapes these decisions and actions." (Whittington *et al.*, 2002: 194)

Since the practice of such strategic action *"'....is concerned with going inside the lived experience of strategy as a practice, understanding it from the eyes of those engaged in it.'"* (Jarzabkowski, 2005:180); this sheds light on why much of the difference may take place at the individual cognitive level, (foresight as a component of Intuitive Intelligence) and why this may make the difference for such strategic decision makers.

In terms of the scope of the study, only 'inside' corporate level strategic decision makers were examined (CEO's, senior executives). To them, external threats are largely *"'...not under the direct control of the corporate decision makers.'"* (Stahl & Grigsby, 1991: 30). Thus it stands to reason that any ability that enables the corporate decision maker to maximise opportunities and minimise threats is important to understand. In terms of the corporate decision maker, it is important to note *"'...how the decision-making biases of the CEO...'" [including senior executives in terms of this study] "..can impact the quality of the strategic decision."* (Stahl & Grigsby, 1991: 18). Hence biases, and lack of insight, are factors which block foresight and hence Intuitive Intelligence.

There are various filters, biases, and information processing limitations, bounded rationality, (Simon, 1978), that colour the leaders' reading of the environment which act to influence their strategic choices, and ultimately govern their strategic decisions. According to Hambrick & Mason, (1984) in the article *'Upper echelons: the organisation as a reflection of its top*

management'; Figure 6.9 explains why the same situation can evoke different strategic responses (and hence decisions), *(both effective and ineffective)*, by different decision makers.

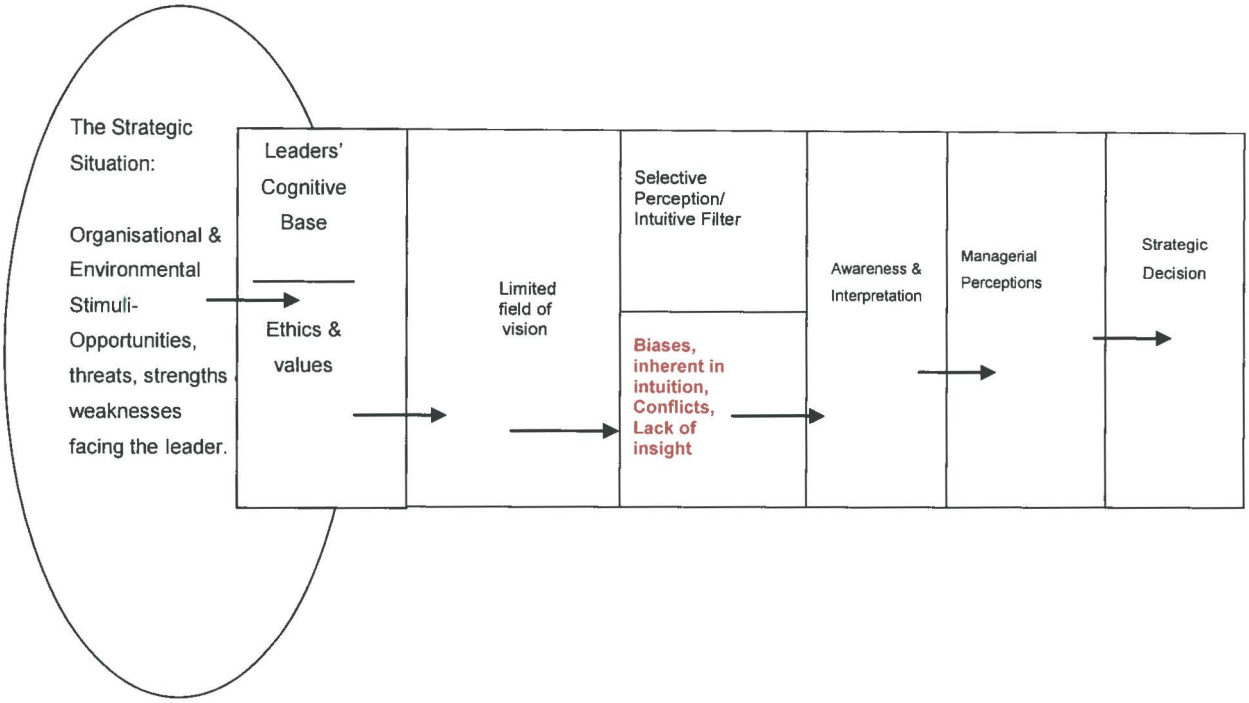


Figure 6.9 Decision making biases affecting outcomes of strategic decisions.

Adapted from Hambrick & Mason, (1984:195)

Before a series of strategic decisions can be taken therefore, and before a strategy pattern emerges, it is important to understand the factors that affect successful or effective outcomes of a strategic decision. There are biases, conflicts and lack of insight, as discussed in Chapter Two. As Stahl & Grigsby, (1992) put it: *"How can the executives communicate with one another if they cannot correctly articulate the important factors in their decision processes?"* Stahl & Grigsby, (1992: 16)

This lack of insight into executives' own decision making is confirmed by this study, and referred to as intrapersonal and interpersonal awareness (or lack thereof as in Chapter Five, Research Objective Three). Since senior executives are conceived as *"'...intentional actors who aim to pursue goal*

directed activity...'" (Jarzabkowski, 2005: 23); they are responsible for strategic leadership responses - about envisioning a future, and responsibly leading the organisation towards that future (Gleason, *et al.*, 2011).

Conclusion

The organisational strategy is then the discernable pattern which is revealed over time from the decisions and actions taken within the organisation. If strategy is shaped from a stream of decisions and actions (Mintzberg 1989; Whittington *et al.,* 2002) and if the decisions that shape the actions arise at times from a source which is intuitive in nature, (Mintzberg, 2001) then to properly understand how strategic decisions are formed necessitates an understanding of the intuitive inputs which gave rise to the strategic decision in the first place. This study confirms that effective decisions made by senior executives using intuitive inputs, contain foresight as an important component, bearing in mind that foresight involves a 'certain take' on the future.

6.2.7 Integrated Finding Seven: Intuitive Intelligence is *not* Intuition. Intuitive Intelligence: that which is *born* of intuition, but *raised* by the rational.

Figure 6.10 identifies key intrapersonal, interpersonal, and professional competencies necessary for effective business practice and performance (Covey, 1994; Robbins & Hunsaker, 2009). Although the inventory is not exhaustive by any means, it does include those skills most expected to be contained in a 'leadership response tool kit". These skills include:

- Self awareness – this was confirmed as inter-and intrapersonal awareness as discussed in Chapter Five, Objective Three.

- Management skills and competencies: such as planning, leading, motivating, delegating, communicating, problem solving / decision making. The central theme of the study.

- 'Intuitive' skills (Robbins & Hunsaker, 2009) in areas of leadership decision making, including practise and experience in the use thereof. This was confirmed by the study in Chapter Five, Research Objective Two.

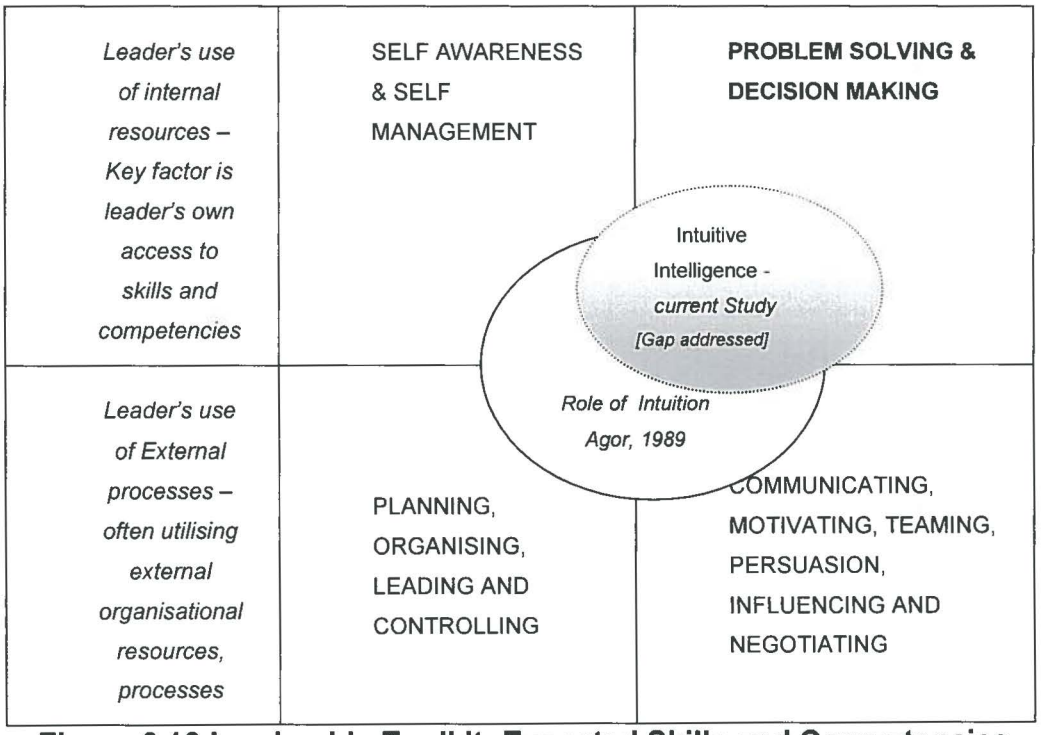


Figure 6.10 Leadership Toolkit: Expected Skills and Competencies

Adapted from Robbins & Hunsaker (2009).

While it is acknowledged that all of the above processes involve the utilisation of the leader's own internal resources, the scope and focus of the study lies in the area of decision-making. When speaking of intuitive decision-making, Agor (1989) pointed out that brain skills have an important impact on management preference and productivity. Cognitive blink in Gladwell, (2005) suggests that intuition bypasses the usual 'thinking' pathways to 'see' the solution or action or decision to be taken. Gladwell proposes the use of what is termed 'thin-slicing', an alternative ability. This is the opposite of what is currently experienced as 'analysis paralysis' (Agor, 1989), where too much 'thinking' renders the decision maker ineffective - virtually paralysed into indecision and inaction. However, in seeking to flesh out the narrative of Intuitive Intelligence in a scientifically robust manner, it is necessary to distinguish what Intuitive Intelligence is *not.*

- Intuitive Intelligence is not *ineffective.* When describing their effective decisions, leaders confirmed that there was a difference between the intuitive inputs of their ineffective decisions and the intuitive inputs of their effective decisions. In both instances, strategic decisions were described, and in both instances intuitive inputs were described. However, the outcomes were not the same; so what made for the difference in outcome effectiveness?

The study confirms material differences in the quality of the decision-making; these were identified in Chapter Five, and are iterated here as follows:

In terms of Intuitive theory, and depending on the conceptualisation thereof, baseline *intuitive* inputs comprise mainly of the following six components (Behling, 1991; Burke & Miller, 1999; Dane & Pratt, 2005; Sadler-Smith and Shefy, 2007) Experience, Emotion or affect, Knowledge, Skills, Automatic / subconscious information and mental processing, and Values.

This study posits that Intuitive Intelligence *evolves* from intuition, and that this missing link (or links as it turned out) were confirmed by the study as

having a further seven components, (thirteen in total), which did in fact synergise into the leaders' display of intuitive intelligence in terms of performance, ability, and development. This was discussed in Chapter Five: Phase One; and Research Objective Three – Seven)

These were:

1. Experience and exposure
2. Emotion(EI)
3. Knowledge and expertise (including domain specific)
4. Skills (and practice thereof)
5. Information and mental processing (Auto and subconscious)
6. Ethics and values
7. Awareness (inter, intra, and situational)
8. Intuition (Intuitive prompting)
9. Risk – reward - consequence
10. Foresight
11. Contextual sense making
12. Conscious effort
13. Continual learning

When these components worked in synergy, the whole in effect was definitely greater than the sum of its parts. Powerful enough to inspire leaders to create legacies (Duggan, 2007). Therefore what Intuitive Intelligence is *not* is a composite prone to biases, blockages, and lack of insight – that which plagues baseline intuition.

Conclusion

The argument presented in this study is that the leader's intuitive decision making develops over time and practice into an ability manifested in performance - Intuitive Intelligence. That this Intuitive Intelligence has not been previously written about within scientific realms is perhaps due to the various perceptions that abound in terms of intuition itself i.e. perceptions of a somewhat problematic decision making tool (Miller & Ireland, 2005). This study confirms the validity of baseline intuition being linked to ineffective outcomes, and another way of identifying what Intuitive Intelligence is *not*. This leads to finding eight in terms of: '*What is Intuitive Intelligence?*'

6.2.8 Integrated Finding Eight: Intuitive Intelligence - an evolutionary intelligence link...

A more comprehensive understanding of what Intuitive intelligence is appears to emerge from an integrated look at the characteristics of Intuitive Intelligence itself; in that Intuitive Intelligence may appear to fill a missing link in the evolution of intelligence per se. In order for this thinking to preside, intelligence criteria not only need to be present, but need also to be linked to the survival, adaptation, and the evolution of the species.

Chapter Five – Research Objective Seven, pointed to such intimations - 'intuition evolves into an Intuitive Intelligence fed by the leaders' own conscious efforts, awareness, EI, experience, knowledge, skills, active learning, resulting in the leaders' effective response.

Certainly, way back in 1987, Rowan indicated that intuition hailed from humble evolutionary beginnings such as instinct. Thus evolutionary development of the construct of Intuitive Intelligence is exploratory in remit, and within the realm of theoretical conjecture; wherein Intuitive Intelligence is depicted as stemming from intuition, and developing further along an evolutionary path, see Figure 6.11.

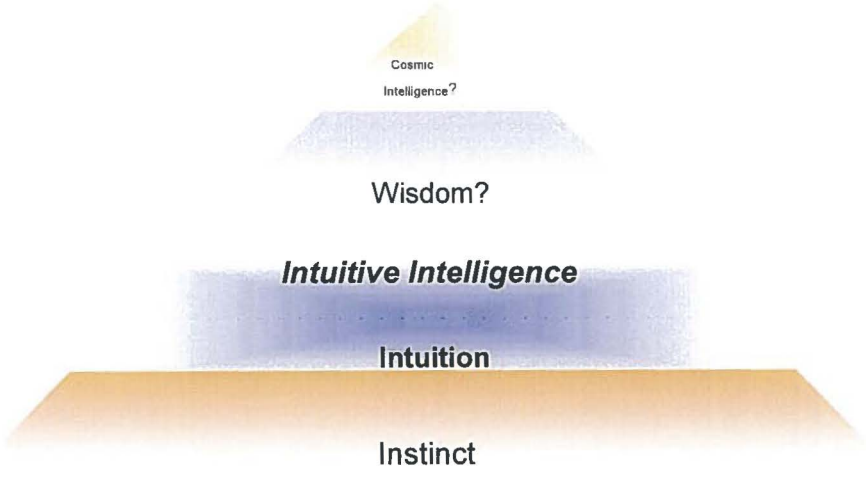


Fig 6.11 Evolutionary development of Intuitive Intelligence

The value of illustrating an evolutionary development in terms of Intuitive Intelligence, is offered for completion in exploratory thinking, and brings to light recent insights in terms of çosmic central intelligence database (Chopra, 2008); or nonlocal intelligence (Chopra, 2009); linking interdisciplinary fields, such as Quantum physics (Peat, 2001) and Sagan's (1977) view of the interconnectedness of cosmic, or 'nonlocal intelligence' as such.

In terms of the research study remit, the view of intelligence includes not only intellect, but an ability to solve problems and remain effective in the real world, operating with certainty, in the absence of complete certainty. In this sense, an integrated view of intelligence is adopted. This integrated view is also one which resides in the Thirukurral, an ancient classic text dating back to 500BC (Vanmikanathan,1985), denoting a holistic form of intelligence linked to 'cosmic' intelligence and integrated in the sense that the ability to generate new knowledge was part of the intelligence package. Thus within this perspective, intellect and the 'certainty of knowledge' (Gardner, 1993: 59) is only part of the equation of intelligence. This holistic view of Intuitive Intelligence is supported by Sagan (1977) below:

"Thus the recent rapid evolution of human intelligence is not only the cause of but also the only conceivable solution to the many serious problems that beset us. A better understanding of the nature and evolution of human intelligence just possibly might help us to deal intelligently with our unknown and perilous future" (Sagan, 1977: 4)

The understanding of an evolutionary Intuitive Intelligence geared to help prepare us for the future, may provide an account of why it is that certain leaders have a knack for effective decision making, and an uncanny ability to 'call it right' even in the absence of all the complete information. The question is that if Intuitive Intelligence had been identified in ancient times, could one identify it in contemporary business times? Specifically in the area of *effective* leadership *strategic decision making?* Again, Sagan (1977) appears to think so: *"Human beings and other animals have very sophisticated high –data – rate perceptual and cognitive abilities that simply bypass the verbal and analytic consciousness that so many of us regard as*

all of us there is. This other kind of knowing, our non-verbal perceptions and cognitions, is often described as intuitive." (Sagan, 1977: 157).

Sagan's point here is hardly anecdotal. He points out to the impact of experience and the learned environment on the ongoing development of the intuitive faculty. This tracing of the evolutionary past, and developmental faculty, is as astounding as his next description:
"But intuitive knowledge has an extremely long evolutionary history; if we consider the information contained in the genetic material, it goes back to the origin of life." (Sagan, 1977: 158). Sagan also points to an anatomically identifiable 'intuitive' location in the brain, and points to the purpose of this intuitive function as the survival of the humankind. *"The survival value of such ability, particularly for our ancestors is quite clear" (Sagan, 1977: 157).* Consequently, it stands to reason, then, that such a faculty whose purpose it appears is the survival of the species, be endowed with some form of intelligence, coined for comparative reasons in the study as 'Intuitive Intelligence'. Clues to further evolutionary leaps are certainly provided in the ancient texts, as seen in Figure 6.12

Fig 6.12

ஐயுணர்வு எய்தியக் கண்ணும் பயமின்றே
மெய்யுணர்வு இல்லா தவர்க்கு

Five-fold perception gained, what benefits accrue
To them whose spirits lack perception of the true?

(Translated by G. Pope, 1886)

Figure 6.12 features the couplet from the Thirukkural, and the ancient sage Thiruvallavar who composed the classic. The reference is to a way of knowing other than that gained from the five senses. A way of knowing which supposedly surpasses the conscious analytical pathways known to man (Vanmikanathan,1985). Intuitive Intelligence as such, denotes the person as being anecdotally wise, capable of holistic reasoning, effective right action and indeed effective decision making. The link to wisdom is

clearly indicated, as is the development of cosmic intelligence in the form of connectedness to a 'çosmic' central intelligence database; or 'nonlocal intelligence' (Chopra, 2003).

And according to one of the greatest minds on the planet, Stephen Hawking elucidates : *"I rely on intuition a great deal. I try to guess a result, but then I have to prove it. And at this stage, I quite often find that what I had thought of is not true or that something else is the case that I had never thought of. That is how I found black holes aren't completely black. I was trying to prove something else."* (Hawking, 1994: 157)
It appears, that the move to *'prove'*; (one of conscious effort and continual learning), shifts the intuitive gear to 'something else' - Intuitive Intelligence.

However exploratory and beyond the remit of the study an evolutionary link is though, the relevance at a business level is of the sense of leadership operating responsibly within a collective stakeholder context, not just for maximisation of profit, but also out of a sense of sustainability (Gleason, *et al.,* 2011). As such, this is indicative of a momentum sway in holistic thinking; away from the 'me' in business toward a collective 'us". Away from the arrogance of ego and bias in intuition toward an intuitive intelligence imperative of ethics and 'right' action.

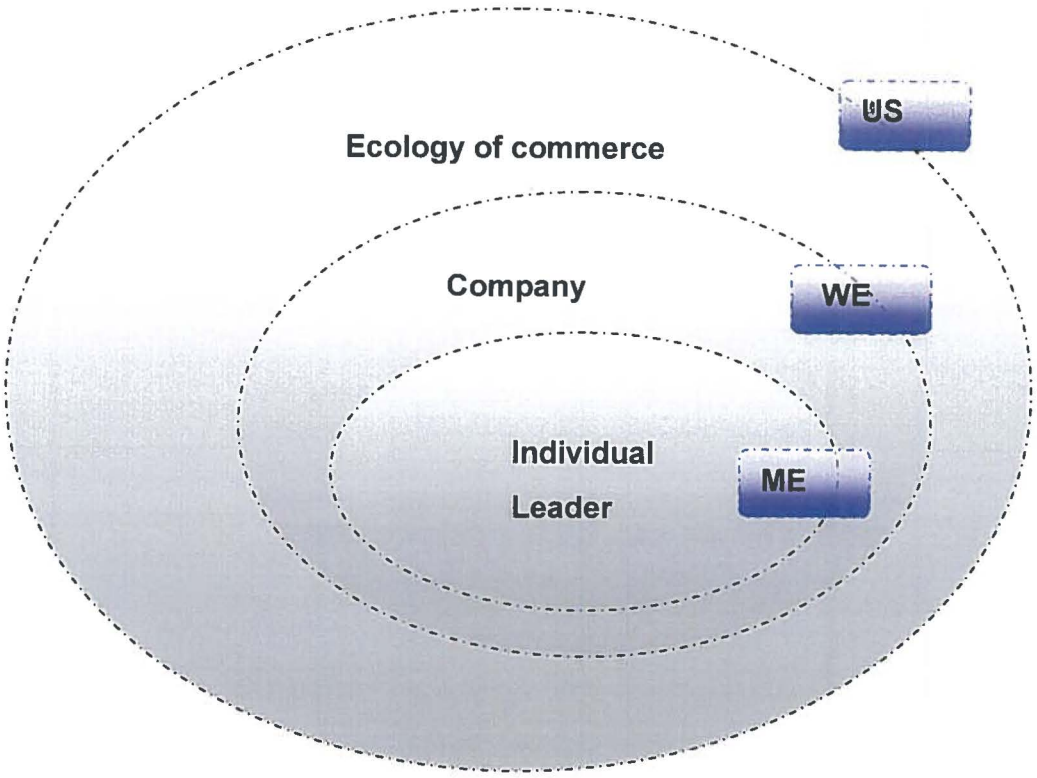


Figure 6.13 Holistic view of Responsible Leadership

Mirvis et al., (2010) in Gleason et al., (2011)

Figure 6.13 illustrates this leap in thinking within a business context, and shows how the 'traditional logic' of profit maximisation and accountability to shareholders' fades and ushers in new thinking; the 'something more' in terms of responsible leadership. This is described along the following four space / time dimensions (Mirvis *et al.*, 2010 in Gleason *et al.*, 2011: 409).

- Economic - concerned not just with profits, but with wealth creation; capital encompassing society, and planet (Developing the triple bottom line further).
- Social/ Political – concerned not just with legal compliance but with confirmation of the 'licence to operate' through collaborative efforts, networks, and stakeholder partnerships.
- Ecological – concerned not just with the mitigation of impacts, but with managing the footprint on the planet; leaving behind a legacy.
- Ethical / Moral – concerned not just with minimising harm, but remediating, repairing, sustaining.

Conclusion

Just what is meant by Intuitive Intelligence in terms of real world application, and the possibility of evolutionary links of Intuitive Intelligence are indicated, (Sagan, 1977; Chopra, 2003), with the characterisation of an evolutionary Intuitive Intelligence operating compatibly within the paradigm of global responsible leadership (Gleason *et al.,* 2011).

6.2.9 Integrated Finding Nine : Intuitive Intelligence Framework and positioning within the business context.

The study undertook to provide a framework for Intuitive Intelligence within the context of leadership strategic decision making. In Figure 6.14, the study positions Intuitive Intelligence within the macro business and organisational context in terms of the following framework:

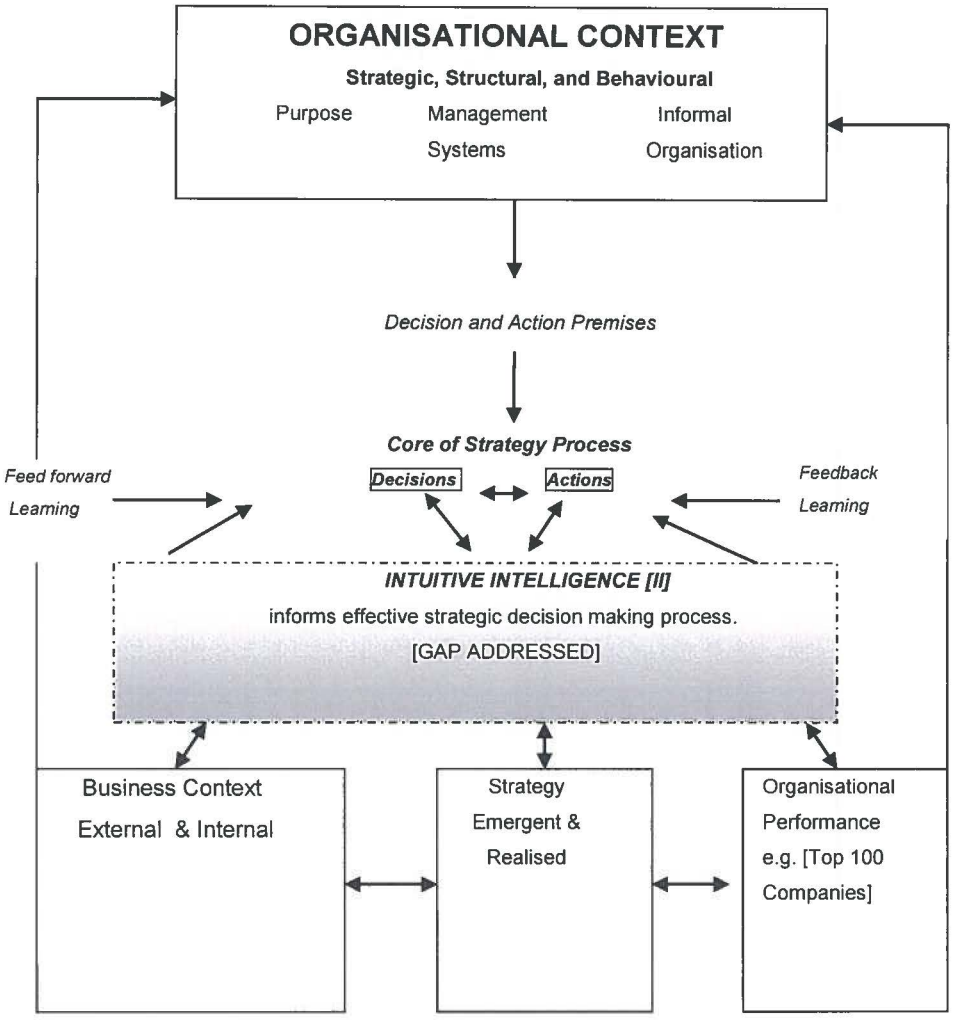


Fig 6.14 Final Framework and positioning of Intuitive Intelligence within the organisational and decision-making context

Adapted from Pettigrew et al.,(2002: 195)

Figure 6.14 shows the organisational context, within which the dynamic of decision making, action taking, learning over time, and organisational performance occurs. The dotted area shows the gap addressed by the

study in terms of locating Intuitive Intelligence within the organisational and decision-making context. The strategic, structural and behavioural context is shown; unfolding organisational purpose, it's formal and informal management systems; iteratively informing Intuitive Intelligence in strategic decision-making. Strategy then is depicted as a stream of actions and decisions which are continuously revised by feedback and feed forward learning over time.

Conclusion

The above framework locates Intuitive Intelligence within the organisational context; addressing the gap in the body of knowledge in terms of the focus and findings of this study. Thus by implication; leaders need to foster their intuitive development into Intuitive Intelligence competencies, as indicated in the recurring themes emerging in terms of the components of effective decisions using an intuitive input. Of note are components such as conscious effort, learning, business awareness, foresight, and understanding of contextual influences (process and practice), knowledge, experience, and the trigger of intuitive promptings. Intuitive Intelligence appears to be widely informed by the 'context counts' injuncture. (Balogun & Hailey, 1999; Kanter, 1983; Ansoff, 1987). Effective decisions as a result of these components appear to resonate with a knack for timing, with reflection and hindsight fostering a leaders' 'foresight'. This leads to recommendations for the application of Intuitive Intelligence.

6.3 RECOMMENDATIONS

The following recommendations are addressed in terms of the epistemological underpinnings of the body of knowledge within which this study overlaps.

6.3.1 Strategic Management

6.3.1 Gluck, *et al.,* (1982) were the first to provide a clue regarding the role of the senior executive, in relation to the application of Intuitive Intelligence.

Table 6.1 Evolution of Formal Strategic Planning

Effectiveness of Formal Business Planning	Phase 1	Phase 2	Phase 3	Phase 4
Value System	Operational Control Annual Budget Functional Focus	More effective planning for growth Environmental Analysis Multiyear forecasts Static Allocation of resources	Increasing response to markets and competition Thorough situation analysis and competitive assessment Evaluation of strategic alternatives Dynamic allocation of resources	Orchestration of all resources to create competitive advantage. Strategically chosen planning framework. Creative flexible planning processes. Supportive value system and climate.
	MEET BUDGET	*PREDICT THE FUTURE*	*THINK STRATEGICALLY*	*CREATE THE FUTURE* ***(USE OF II)***

Adapted from Gluck, Kaufman & Walleck (1982:157); Stahl & Grigsby, (1991:20)

Table 6.1 shows the model of the organisational evolution of strategic management, from planning to management.

- Phase 1: involves financial planning, and operational control is improved via financial control.
- Phase 2: shows the time line of the organisation being extended beyond the following financial year. Attempts are made to predict impact of future events on the organisation.
- Phase 3: where the response to market conditions is planned for, as well as anticipated strategies of competitors.
- Phase 4: where the level where resources are strategically managed to create competitive advantage.

  The recommendation is that the exercising of Intuitive Intelligence within this strategic management process; be done with conscious focus and purposive effort, with lessons both learnt and shared, within the organisation.

6.3.2 Intuitive Intelligence competence in effective strategic decisions

Stahl & Grigsby (1991) offer the following three characteristics which distinguish strategic decisions from other business decisions (on the level of corporate strategic decision-making):

"1. Strategic decisions deal with concerns that are central to the livelihood and survival of the entire organisation and usually involve a large portion of the organisation's resources.

2. Strategic decisions represent new activities or areas of concern and typically address issues that are unusual for the organisation rather than lend themselves to routine decision making.

3. Strategic decisions have repercussions for the way other, lower- level decisions in the organisation are made." (Stahl & Grigsby, 1991: 4)

Given the far reaching impact of strategic decisions, leaders need to locate their own competence in terms of Intuitive Intelligence. This would necessitate a baseline assessment as well as further tracking along the path in terms of development.

6.3.3 Transformational versus transactional leadership; and positive Organisational culture

The leadership influence of top management in coaching and guiding strategy is quite powerful. (Whittington,1993). For risk taking to occur, members of the organisation throughout must feel that trust is in place, and that no members feel any violation of vulnerability. Since the study explores the role of Intuitive Intelligence in strategic decision making; the positive practice thereof should be encouraged. The responsibility thus lies with leadership to foster a supportive organisational environment and culture which does extract learnings from executional failure, thus tapping opportunities previously untouched (for fear of blame/ negative feedback / reprisals). That is, adopting a transformative leadership style which is sure to resonate with such behaviour more than its transactional counterpart in terms of leadership style.

6.4 Conclusion

Chapter Six summarised the study positioning within the theoretical foundation of the existing body of knowledge. Gaps were addressed by the study within this framework, and the narrative of Intuitive Intelligence was explored. In terms of factors impacting on the leaders' strategic decision making paradigm; the often uncanny ability of leaders to call it right appears to arise from intuitive origins but may well develop into what is ontologically intelligent in nature – an Intuitive Intelligence which provides areas of certainty and knowledge to business leaders in times of need.

Chapter Seven deals with contributions of the study, further recommendations, future research and the path less travelled – the research audit trail.

CHAPTER SEVEN

CONTRIBUTION, RECOMMENDATIONS, FUTURE RESEARCH

7. 1 Introduction

This chapter reflects on the contribution of the study, recommendations, future research, and audit trail, commencing with the positioning of Intuitive Intelligence within the overlapping epistemological framework, and interdisciplinary fields. Since senior management both individually and collectively make decisions that affect the strategic outcomes of an organisation, it is acknowledged that *these decisions are not "'...just rational (or boundedly – rational), but also driven by intuition and emotion. Research on the strategy process has for the most part ignored the role of intuition and emotion in strategy making and implementation. This is an important new area for research.'" (Whittington et al., 2002: 199)*

Indeed, in this study, the above injunction from Whittington (2002) has in terms of study contribution been taken to heart. The study also locates its ontological roots in the nature of reality itself, with implications for the epistemological overlap, as shown in Figure 7.1

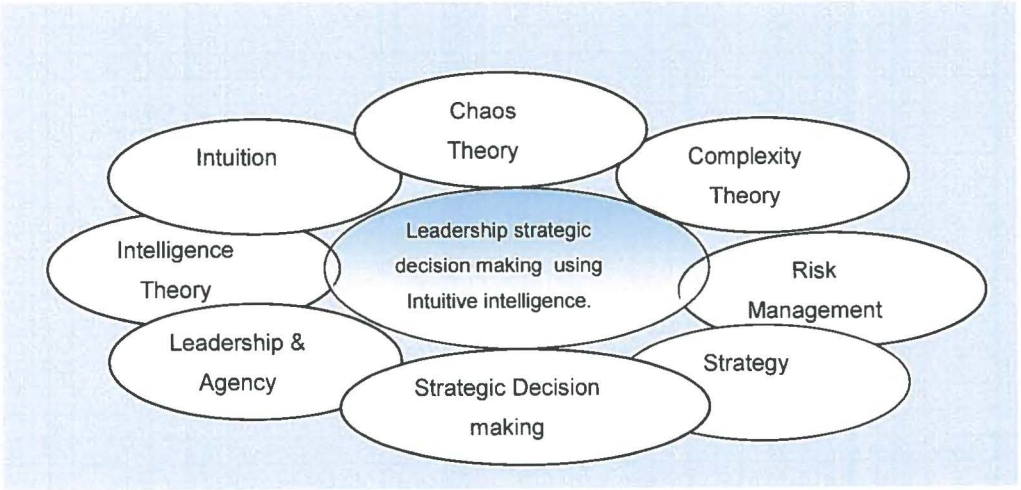


Fig 7.1 Epistemological framework explored in the study.

7.2. Strategy, Leadership Strategic Decision making, Chaos and Complexity

7.2.1 'Surf the edge of Chaos'

Given the finding (integrated finding 6.2.1) that leaders defaulted to an intuitive mindset under conditions of uncertainty, complexity, ambiguity, risk and incomplete information, it means that the leader needs to, at dizzy heights be able to lead or 'surf' at the 'edge of chaos' (Pascale, 1999). The leader thus has two options: use intuition racked by bias, and / or prejudice, unbridled emotive content, or to make the difficult but conscious step toward Intuitive Intelligence. The contribution of this study points at the definition and differentiation between the two, and aims at the leaders' informed choice of the latter.

7.2.2. 'Leading with meaning and meaning to lead'

The second contribution of the study is with regard to the importance of 'contextual sense making', bearing of ethical responsibility, and engendering awareness (situational awareness, as well as intra and interpersonal). Jones (2004) voices thus:

"So we need to consider our own particular 'portfolios' of meaningful concepts, and, given the diversity of approaches this is bound to contain, how we come to accept such a plurality of incongruent actions or techniques in strategy yet remain able to communicate and act effectively." (Jones, 2004: 506). This study has framed the leaders' effectiveness as a function of conscious effort and learning that leaders engage in, within such a discursive, communicative (oral, written or symbolic) context.

7.2.3. Intuitive Intelligence – 'better late than never'

The third contribution of the study has been toward understanding the leaders' effectiveness in strategic decision making, whereby the leaders' willingness to find workable solutions within a sustainable and profitable context, is itself attuned to, (not in conflict with), the workings and hitherto overlooked role of Intuitive Intelligence. In so doing, this study closes a gap

in understanding the role of Intuitive Intelligence within a business leadership strategic decision making context. Much of the literature on intuitive decision making worldwide has been mainly of a theoretical conceptual nature. However, this study, being empirically based, offers useful insights for a real world business and practitioner context. Thus it is hoped that this exploratory study serves to spark off further research in this arena.

7.3 Intuitive Intelligence, Intelligence Theory, and Intuition

7.3.1 Quantum leaps

Given integrated finding 6.2.7. that Intuitive Intelligence is de facto, neither unintelligent nor ineffectual, the narrative of an intelligence that bore humble instinctual beginnings, began to be traced. Narratives of leaders who made conscious efforts unfolded. Those who listened to, and heeded its faint voice, were able to respond in tough times with 'something more'. (Pascale, 2004: 478). 'Quantum leap' and 'wisdom' links were referred to by the leaders themselves, as discussed in Chapter Five, specifically in (5.7.4) by Purposive 2, and P5. A keen focus on the leader (as the strategist), places the leader centre stage, tugging at the heart of the strategic process. It is hoped that the insights yielded as a result of the research may serve as a rich source of knowledge e.g. (Intuitive Intelligence in strategy practice). This is important knowledge – wise, as : *"'...when we eliminate from strategy practice what makes us human, it risks becoming as lacklustre, trivial and empty as many texts describing it... '"* (Roos, 2006:15)

7.3.2 From hindsight to foresight

The study offers firm foundational understanding around what is essentially a tacit process, and to try to explicate this process such that it serves as a guide for business leaders to follow. Thus it affords them the 'benefit of hindsight', such that foresight is engendered. Further confirmation from the study toward the development of Intuitive Intelligence is that the leader should have a trusted peer network to mitigate bias, blockages and social dynamics such as power and influence; so involving a collective rather than an individual effort, albeit also acknowledged that sometimes senior

executives alone, "'*..may be the instigator of this decision.*'" (Whittington, *et al.,* 2002: 194). In this respect, decisions and the process for reaching them may not always be a deliberate one, nor may it be consensual, or even clearly articulated. Such were the constraints and challenges of this study: and this may well be overcome by future studies.

7.4 Recommendations and Future Research

7.4.1 Recommendations from this study are:

- Further empirical testing, to see if there are explanatory measures which may serve to support / refute the narrative of Intuitive Intelligence.
- Assessments developed and linked to performance and ability; with implications for core competencies assessment and development among leaders.
- Flexibility of business school programmes (Nomo, 2003; Coetzee, 2006), to encompass the concepts explored in this study, including a vulnerability to uncertainty and learning, (Casey and Goldman, 2010); with a tacit acknowledgement that there is much known, but much more to know; with respect to the business of learning about learning.

  Thus the direction in terms of future research would be to test the constructs, address any gaps uncovered, and to follow through on strategic implications (responsibility) of research findings.

7.4.2 Future research

- New projects, where information is incomplete, and where speed of decision making, counts, (Agor, 1989, Ireland & Miller, 2005), may also be influenced by Intuitive Intelligence. Without empirical research it is difficult to establish how, and in what way with any certainty.

- The evolutionary links of Intuitive Intelligence would need to be explored. Chapter Five (Research Objective Seven), indicates that "*...intuition evolves into an Intuitive Intelligence fed by the leader's own conscious efforts, awareness, EI, experience, knowledge, skills, and active learning, resulting in the leader's effective response*". Rowan (1987) indicated that instinct was indicative of intuition's humble but

powerful evolutionary beginnings. It will hence be worth the research rigor to track the path of a fully evolving Intuitive Intelligence. For example how do the various types of intuition interconnect, and at what point do they do so. At what point does intuition evolve into Intuitive Intelligence? And what is the link between Intuitive Intelligence and wisdom? Are these components 'gearing' to varying degrees of evolvement?

7.5 Research Audit Trail

Researcher reflection is aided by tracking and logging of research activities, (Corbin & Strauss, 2008; Rice & Ezzy's, 2002). Furthermore decision making in terms of the research is explicated, enabling significance in terms of the study to come to light. Table 7.1 shows the audit trail of this research.

Table: 7.1 Research Audit Trail and Timeline

Date	Action
Aug 2008	Attendance of first SBL DBL Colloquium. ['Good heavens – what am I getting into!']
Sept 2008	Attendance of 3 day – Dissertation Workshop. (Dr Hofstee) – Sept 2008, UNISA. Confirmation of concept and intuitive sense that the topic was worth academic not just pragmatic significance.
Dec 2008	Reading List Report submitted for academic review. Approval was granted to continue onto the next stage – Idea formulation. ['Okay, so you may have something here']
Feb 2009	Presentation - DBL Colloquium I – Feb 2009- Proposal (Idea Formation) Idea formation presented included the outline of the study, research question and objectives. Research Proposal was approved by colloquium. Permission was

	granted to proceed to next stage - Literature Review.
June 2009	Presentation - DBL Colloquium II – Literature Review. The literature review confirmed the gap in terms of Intuitive Intelligence playing a role in strategic decision making. Approval was granted by the colloquia in terms of the Literature review, and permission was granted to proceed to next stage - Research Methodology. The prevailing sense during the Literature review process was ['Yes! Gurus like Mintzberg, Sternberg, and Gardner agree - there is an intuitive input in decision making and eureka - there's a gap!']
July 2009	Attendance - DBL Colloquium – July 2009
September 2009	Presentation of Research Methodology at colloquia - still in intuitive emotive mode about the gaps in the literature review. Colloquia result: "Please present again" Prevailing sense was ["I told you this was tricky – why did you have to get carried away☹!"] Lessons learnt and Intuitive Intelligence triggered - Research Methodology presented in November 2009. Applicability of research methodology was argued in terms of the most appropriate way to answer the research question. A qualitative phenomenological, approach, was coupled with a mixed method design, Dual Phases (One and Two), whereby eight to ten senior executives were to be interviewed. The sense was to focus

	mainly on senior executives of Top 100 companies. Approval on the research methodology was granted, with permission to proceed to Findings. [Sense of 'easier said than done!'] With Dr S. Shipham's approval, and the need to check if this phenomenon was present or not in the field, a probability sample frame was drawn up and regular checks conducted with Prof P.S. Zake to provide a type of 'umpire's third eye' audit type input. Comment on the research methodology was also invited from various respected academics; Prof S. Nkomo, in particular. Input and advice ranged from 'probability sampling is not necessary', to – "the input will be good from these guys if you can get them". Reflecting on lessons learnt (hindsight), the decision to go with the probability sampling frame, and work with consenting participants thereafter, proved extremely expensive in terms of research time, effort, and due diligence. Getting third party observers to provide an objective view of the participants was another challenge - they proved as elusive as the senior executive participants themselves. In the end, and almost four years later, nine senior executives were interviewed (two purposive, and seven from the Top 100 sampling frame). The astounding thing was that both categories of participants (purposive and proportionately sampled) - every single one of them acknowledged the intuitive role in decision making (albeit

	to varying extents). As a researcher a sense that you were actually an instrument of the research itself was confusing, uncomfortable, and altogether overwhelming at times. "Be brave' was Prof Nkomo's injuncture to me –a timeless source of comfort. Also critical was the sense from my supervisor (Dr Shipham), that there was a belief in the value of the study – something which spurred efforts when peaks were passed and troughs were hit. From my husband and daughter was a sense of walking along the path with me, and all of these sources of support I took huge, entirely grateful - heart from.
July 2010	Attendance - DBL Colloquium
Apr 2011	Attendance - DBL Colloquium
Jun 2011	Attendance – DBL Colloquium
Jun 2012	Findings presented. Approval granted from Colloquia panel to proceed. Dissertation submission with Supervisor consent – Aug 2012.
Total Research time invested in DBL research	Average of four hours a day from Jan 2009 – Jun 2012 [42 months]; minimum 3696 hours. Excluding time to type and edit transcripts, time attending colloquia, and time taken to purchase new software. [If this is included, an additional 3000 hours] Estimated total time = 6696 hrs.
Skills	Learning to use new software, editing and proof reading skills
Tools and resources	New laptop investment, Dragon software, Atlas ti software
Sample of self	Tracking : Oct 2011: Typing up interviews – chk txt for sense and correctness in meaning. Tracking: Dec 2011/12/21 -

tracking - not included in entirety – too wordy.	Typing up revisions to forms. Set up third party interview wt Glen; sign off on transcript and post interview. CSI analysed. Feedback – session postponed – Glen busy....Judy to come back. Feel like am nagging her now (sms's and emails!!!) Only responds to telephone calls – direct line.
Dec 2011	Day 1-7 : Finalise post - interview bookings – contact made, but postponed - Glen is busy – follow up...

7.6 CONCLUDING COMMENTS

Relinquishing such a study means reflecting on finished as well as unfinished business. These include further gaps which may have come to light in the process of the study but which were then beyond the present study remit. More '*chains of evidence*' (Jarzabkowski, 2005: 181) would be required to explain the absolute micro details of what leaders do, beyond that highlighted by the study, and a testing of Intuitive Intelligence within, not just an empirical context, but a biological / neurological context.

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APPENDICES

APPENDIX 1 CONTEXT QUESTIONNAIRE

PAQ Questions [Tick the relevant block]

1) When dealing with uncertainty, [where not all the information is known] I think my environment is:

High	Moderate	Low
✓		

2) With regard to complex, ambiguous information, my environment is:

High	Moderate	Low
✓		

3) My levels of risk [the chance of something going wrong] in terms of strategic decision making :

High	Moderate	Low
✓		

4) I have to adapt to changing environments [including instability] :

Daily	Weekly	Monthly	Other Specify
		✓	

5) I have to make strategic decisions without all the complete information:

Daily	Weekly	Monthly	Other Specify
		✓	

6) Out of all the times I have made intuitive decisions, I would say that the percentage they turned out to be right (***effective***) was?

High	Moderate	Low	Own
100-70%	69 -30% ✓	29-1%	%

7) My intuitive based strategic decisions turn out to be ***ineffective***:

High	Moderate	Low	Own
100-70%	69 -30%	29-1% ✓	%

8) My strategic decision making style has changed over the years to become:

More Intuitive	More Analytical	Both
✓		

Key Terms
Uncertainty - not known for sure. Instability - lack of stability; changing; Risk - chance of something going wrong.
Effective – outcome of decision is positive. Ineffective – outcome of decision is negative.

1

APPENDIX 2 INTERVIEW SCHEDULE

DEFINITION	I would like to speak to you about gut feel or intuitive strategic business decision making. 1. There are many cases where top executives are expected to make effective decisions without all the information at hand. Can you relate an instance when you used your gut feel or hunch to guide you? 2. Would you say this turned out to be an effective decision? Why? 3. Can you think of an example where using a hunch or gut feel resulted in a decision which turned out to be a 'bit of a blunder', so to speak? 4. On hindsight, can you relate ***why*** you were able to make a 'spot on' decision, instead of making a blunder?
PROCESS, COMPONENTS, ROLE	So keeping mind this ability to make effective intuitive decisions: 1. What would you say is the actual process you use to make such a decision - **how** would go about making a 'spot on' intuitive strategic decision. 2. If you had to picture in your mind all the elements going into the making of this 'spot on' type of intuitive strategic decision, what would this look like? 3. Do you think this - [the ability to make 'spot on strategic decisions] is something which is a differentiator in the performance of Top executives. 4. Do you think this "spot on ability" is something which **top executives** *should* have compared to other levels of management? 5. Has your intuitive decision making style changed over the years? (More intuitive? Or Less?). a) Has your intuition changed over time, showing any signs of intelligence at all? 6. Say other senior executives asked you ***how*** to develop this 'spot on' ability what would you say? 7. ***What role*** if any, does this same ability play in your senior executive function. [Does it make any difference at all]? 8. Do you think this is an ability which can be linked to say, multiple intelligences such as *emotional* intelligence? 9. If you had a rule of thumb, so to speak, to give to people who wanted to deepen this 'spot on' ability, what would it be? 10. Were there others involved in your key decisions? May I briefly speak with them?

APPENDIX 3 INTERVIEW TRANSCRIPT

Excerpt - Transcript showing changes after being sent to participant for verification

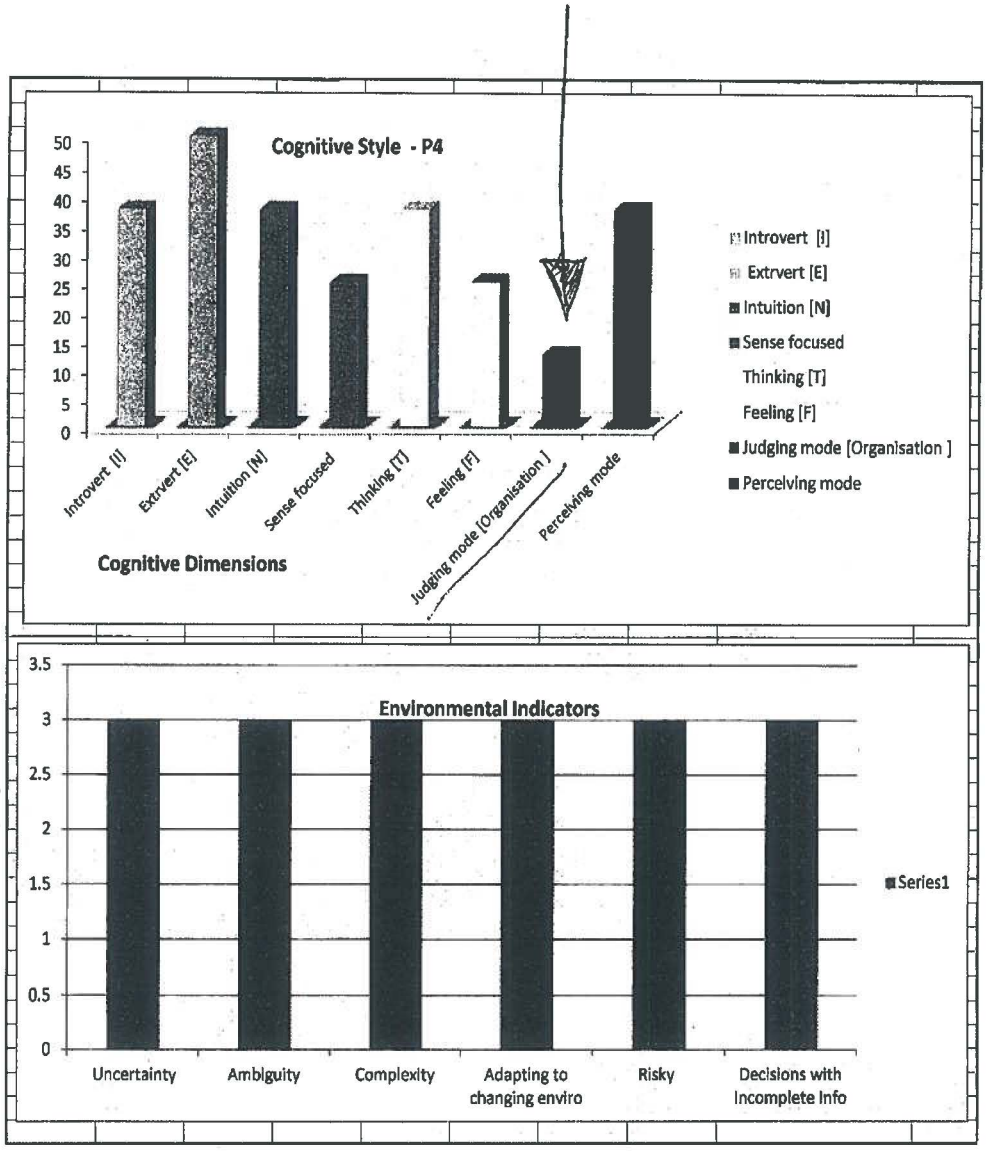
P4: No-no. It's actually. I think I've got it at home. For instance, I'll give you very roughly – you talk about pictorially. This is what happened across calendar 2011... [draws graph]...was the price we received for an ounce of metal we mined. [Heavy sigh] It would have gone from, I think it opened the year at about circa 10 000 rand. It in February was about 12, and it did this (indicates peaks and dips on graph), and finished in December about nine five hundred. And this is all happening in a year. Now you're trying to run a mine, or taking a decision on a business, or open or close a mine based on.*this*..[indicates graph]. This is 'you should close up shop'. This is 'we should be spending hundreds of millions of rands of capital expenditure to expand'. And this is all happening in one - that's in one *year.* And that would be you know, the example of why these things do worry you. Because in Zimbabwe, at our mine in Zimbabwe, in November...(we were) x2 on royalties. People say 'oh that's a lot' I say, 'okay, that's just taken thirteen million dollars a year. Away from the shareholders of the mine'. 'Ah is that relevant?' I say, 'Let's just take in one year. The free cash flow of the mine is about fifty, that means government has just helped themselves to 25% of the disposable cash flow of that asset. And then in Jan, they did plus fifty thousand percent on the groundrinse as they're known. And people say well that's fifty thousand, well I mean you can't even [complain?2] I say, well that's fine - because what used to effectively be a nominal tax, is now seven million dollars a year. I say 'gentlemen, ladies, plus twenty. In one month, the mine makes fifty. Government has just helped itself to forty percent of the shareholders' cash flow. That's the sort of thing. That doesn't happen when you sell tins of baked beans. [Laughter]

R: Absolutely...

P4: That is why in mining, there is a lot more of this stuff [uncertainty diagram] than I think you have say, in retail. Ja, I'm not saying - I mean, I'm sure running Pick 'n Pay is an incredibly complicated business. But they'll have a whole range of different complicated decisions to take than what we're doing in our business. Now the capital cost of setting a store up is a lot, but when you're got five thousand stores ...one store...the capital cost of setting up a new mine in South Africa right now ..the capital cost of a small platinum mine size is probably running at 11 to 15 billion rand. And if you've got these kinds of issues on your revenue line, these kinds of issues...these kinds of issues...these are uncertainties and our dear government doesn't understand what they're doing here. That is why we rank 67 out of 72 in the Fraser Institute.

5

APPENDIX 4 CSI INVENTORY



APPENDIX 5 DUE DILIGENCE POST INTERVIEW EVALUATION AND FEEDBACK

DUE DILIGENCE POST INTERVIEW EVALUATION AND FEEDBACK FORM

RESEARCH ON THE ROLE OF INTUITIVE INTELLIGENCE IN STRATEGIC LEADERSHIP DECISION MAKING

Interviewee Name:	[illegible] URRAY	Post Interview Date:	26/3/2012
Position:	CEO	Contact No.	
Date of Birth:	20/4/62	No of years in position:	11
No of years in industry/ (corporate group)	27		
Name: (optional)		Signature: (optional)	

Feedback from Researcher to Interviewee on all areas interviewed in order to provide feedback.	
Item Covered	Tick if covered. Cross if Not
1. CSI Feedback	✓
1. Post interview comments and reflection / (Log)	
2. Transcript check	✓

Evaluation comments by the Interviewee:

I confirm that the content of the transcript is an accurate reflection of the interview. ✓
Has the interview prompted you to think about your decision making style? Somewhat
Since the interview, what insights have you had about your decision making style?
Is there anything that you will be doing differently as a consequence of this study? Thoughtful about others lacking 'intuition'
Any other insights, reflective comments?

Interviewee Name:		Signature:		Date:	
Researcher Name:	R Swart	Signature:	[signature]	Date:	26/3/2012

APPENDIX 6 OBSERVER / THIRD PARTY EVALUATION

OBSERVER / THIRD PARTY EVALUATION FORM

RESEARCH ON THE ROLE OF INTUITIVE INTELLIGENCE IN STRATEGIC LEADERSHIP DECISION MAKING

Observer / Third Party Name		**Interview Date**	03/03/2012
Position	Non Executive Director	**Contact No.**	

Date of Birth:	12/09/1958	**No of years in position.**	6 yrs	**No of years in industry/economic group**	Mining Construction

Observer / Third Party Interview:	
Item to be discussed	Tick if covered. Cross if Not.
~~1. Issue-Problem-Decision~~	✓
2. Decision Flow Path	✓
3. Strategic Outcome : Was the decision effective in outcome?	Yes

Evaluation comments by the Observer / Third Party : intuitive input

How can you tell if the person (interviewed) made the decision ~~using intuition or intuitive intelligence?~~ (Plse elaborate)

"Light bulb" – "certain spontaneity" That trigger would be (not analysis) proving over

That trigger as intuition"

The decision was effective, but analysis said Something different"

Would there be any other explanations for the person making the above decision? (Other than intuition or intuitive intelligence?) If so, plse elaborate. "The referendum – but

"I don't think so – and decision was

"Blundge - mine was intuitive, but outcome was –ve" effective."

"He viewed intuitive decision with enough to sway board"

Due diligence – technical – 'Short cut' – Left not enough.

What would you tell the difference between intuitive ~~Intelligence~~ and intuition?

A lot of his interventions / decisions - mostly to do with buying + selling.

Eg: Analysis did not support – "overpriced" – "His intuition told him acquisition of Mvelaphanda would be impt. for future deals - Goysendam!" "Thinking ahead" – "You want a Mvelaphanda on the register!"

Observer Name:		**Signature:**		**Date:**	03/03/2012
Researcher Name:	R. Subiah	**Signature:**		**Date:**	03/3/2012

APPENDIX 6 - CONTINUED: OBSERVER / THIRD PARTY EVALUATION

'Dealmakers" depend far more on intuit-
Than your regular everyday managers'

what was intelligent about that decision to you
The intelligence came from 'his looking way
ahead' "It was underpinned bout any formal
analysis. He was thinking 3 steps ahead'
"Use They the data after the fact!

Identify ies it (intuitive input) I can attest to it
'cos I was privy to the process." I am the foil -
he was bouncing off ... thinking aloud"
Why also intuitive - the analysis said "don't
do it!

APPENDIX 7 PERSONAL TESTIMONY

Accreditation and participation in Leadership Decision making study

PERSONAL TESTIMONY

Leadership decision making is an important global issue. In South Africa it is an imperative thus making this study one of vital importance.

This is to confirm that I, S [redacted] have participated in the above research study, in my personal capacity, and have found the study to be of intrinsic value particularly in terms of the contribution to the current body of knowledge regarding leadership decision making in South Africa.

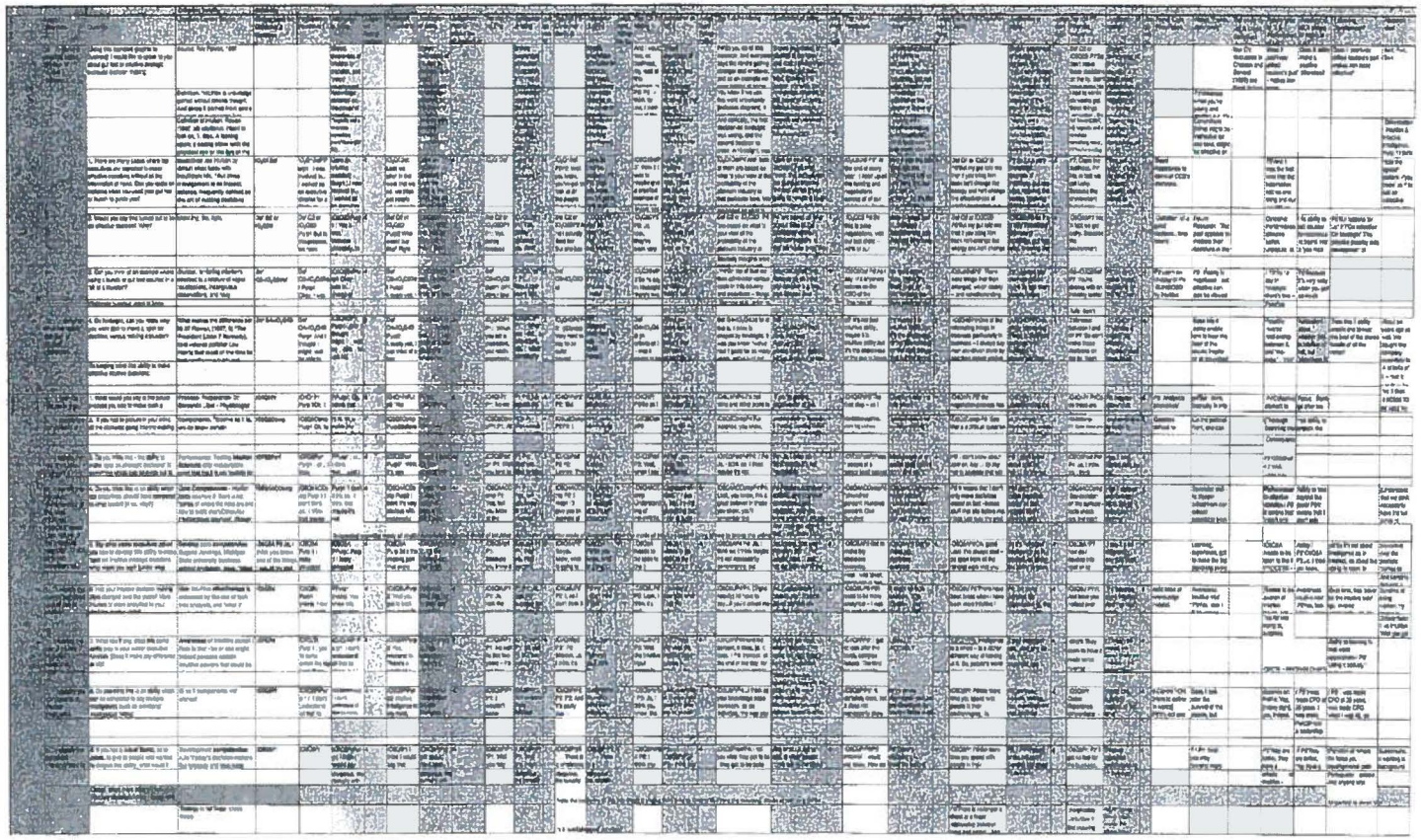
I do hope this study will be given the support it deserves.

NAME: [redacted]

SIGNED: ..... DATE 15 Feb 2012

APPENDIX 8 DATA ANALYSIS - COMPARATIVE MAPPING MATRIX

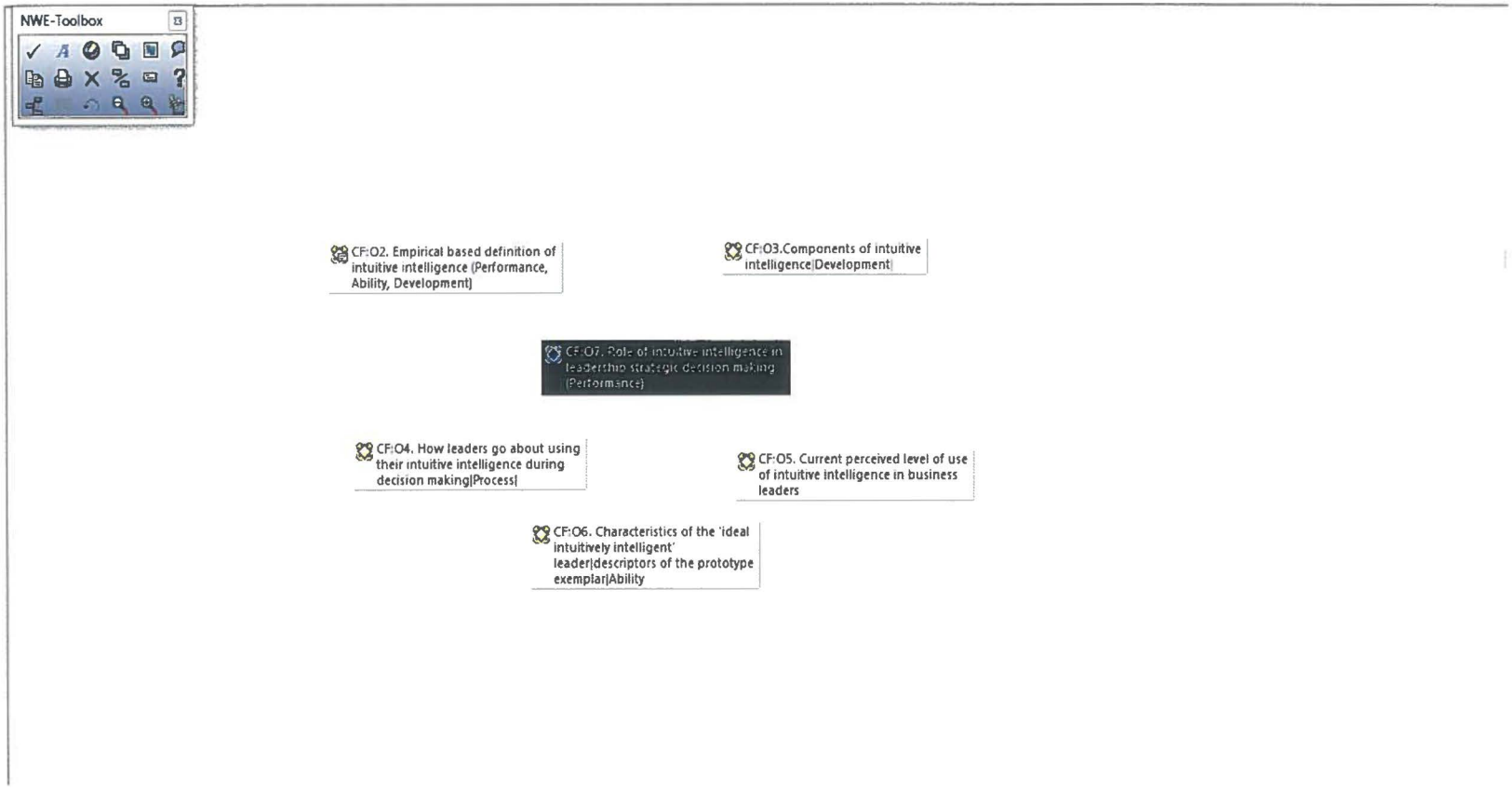
Excerpt of document given the size of the document in its entirety.



APPENDIX 9 ATLAS ti

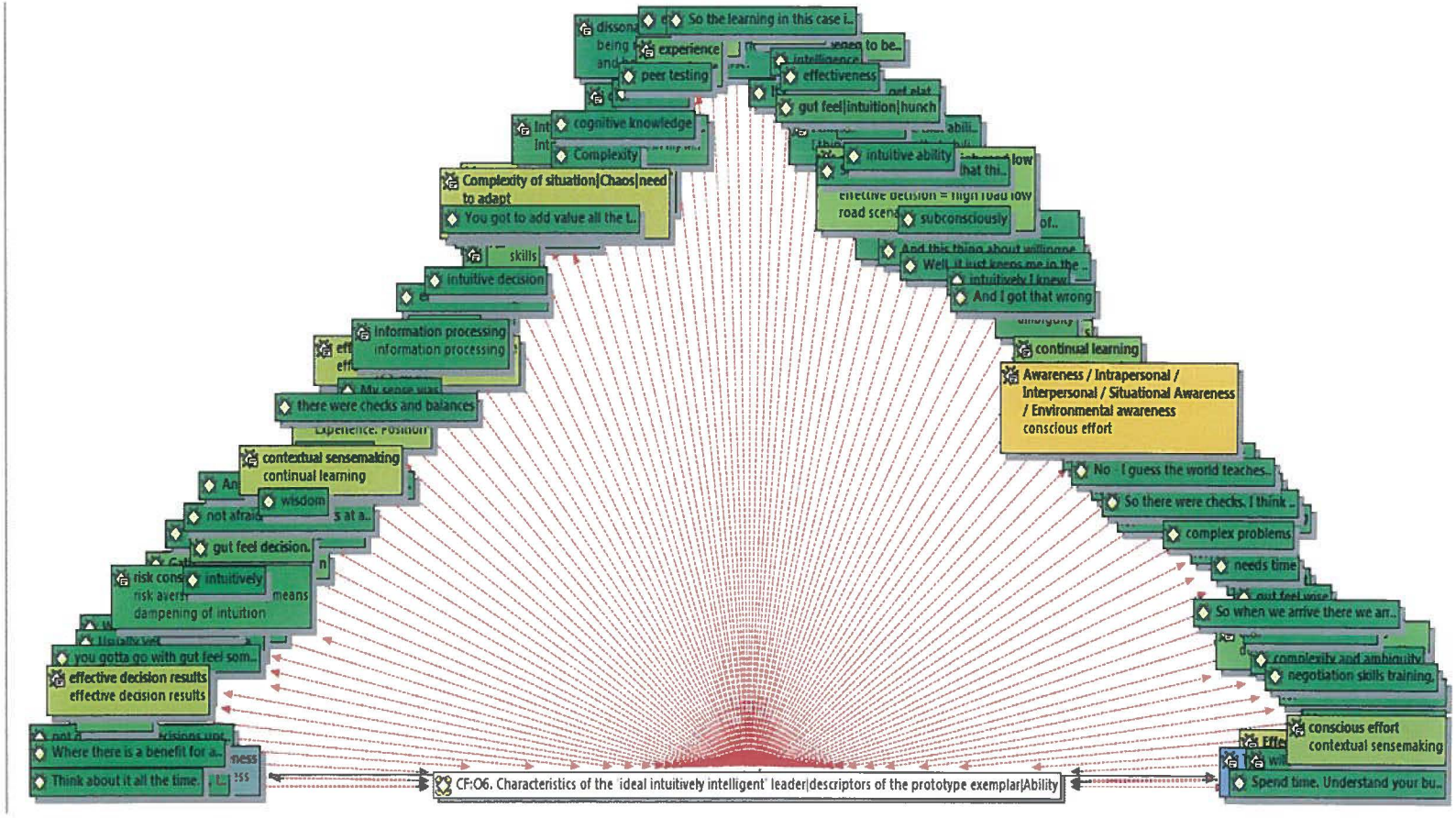
9.1 DATA ANALYSIS & RESULTS

Atlas ti Categories



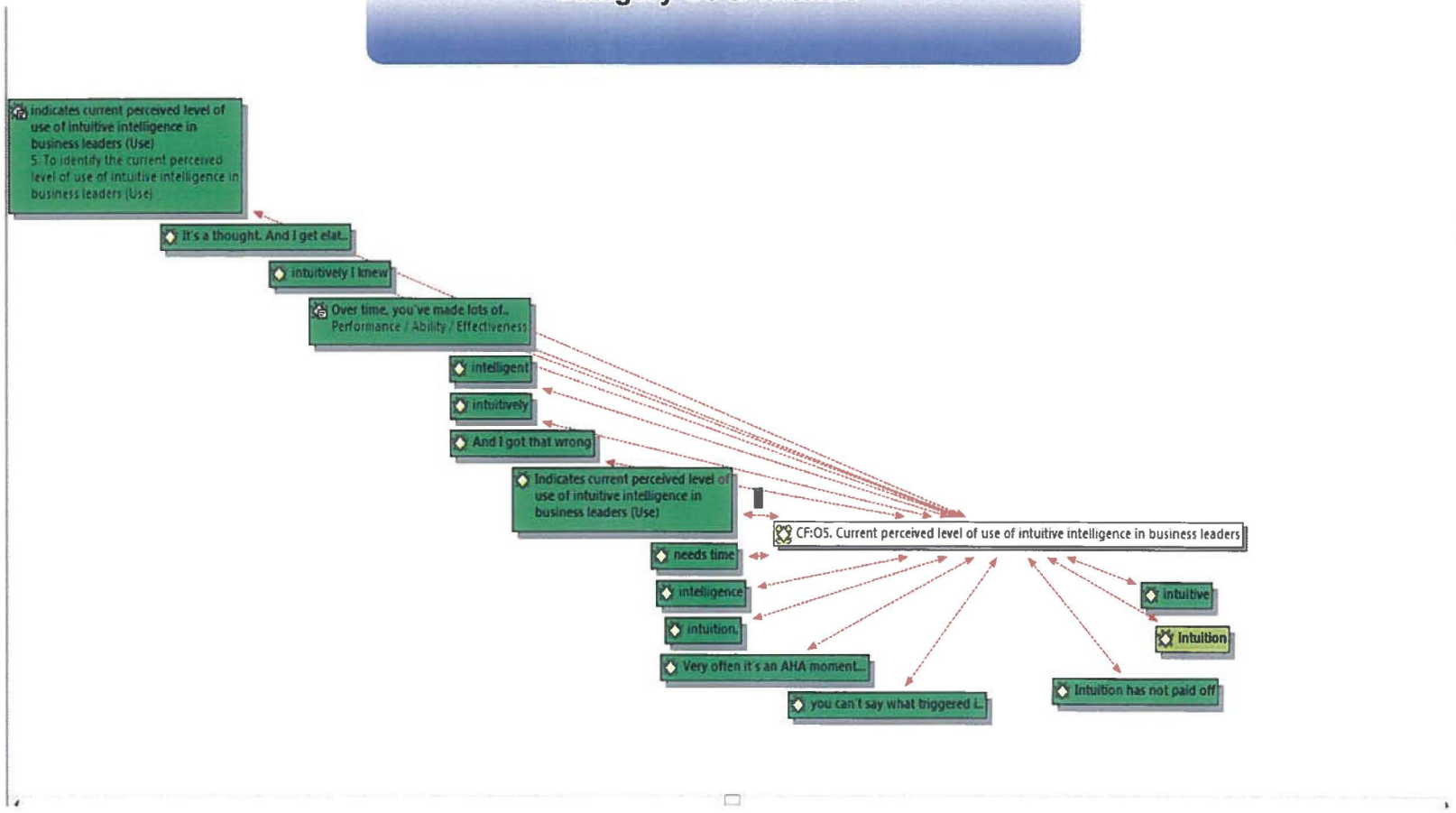
APPENDIX 9.2

Category O6 & Themes



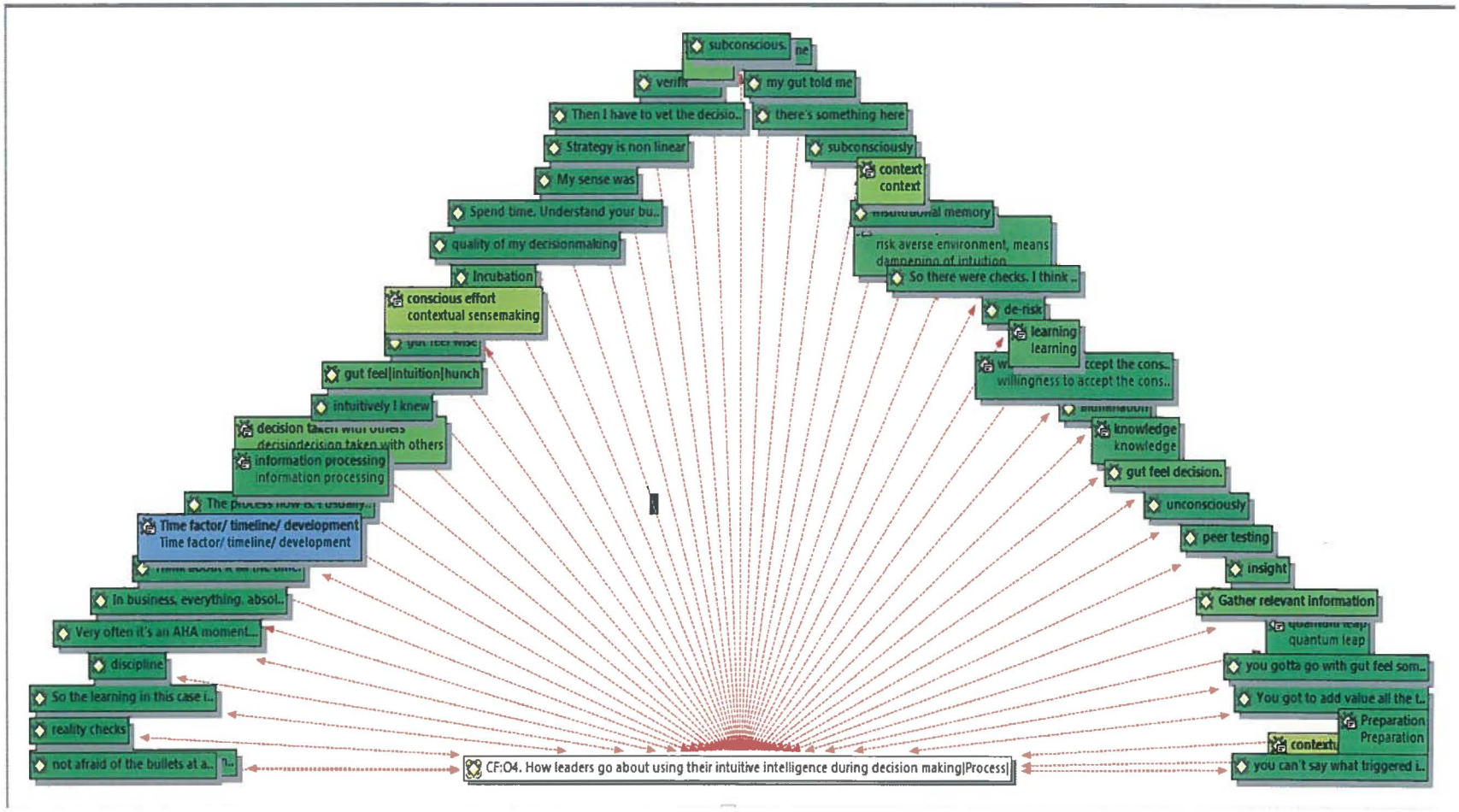
APPENDIX 9.3

Category O5 & Themes

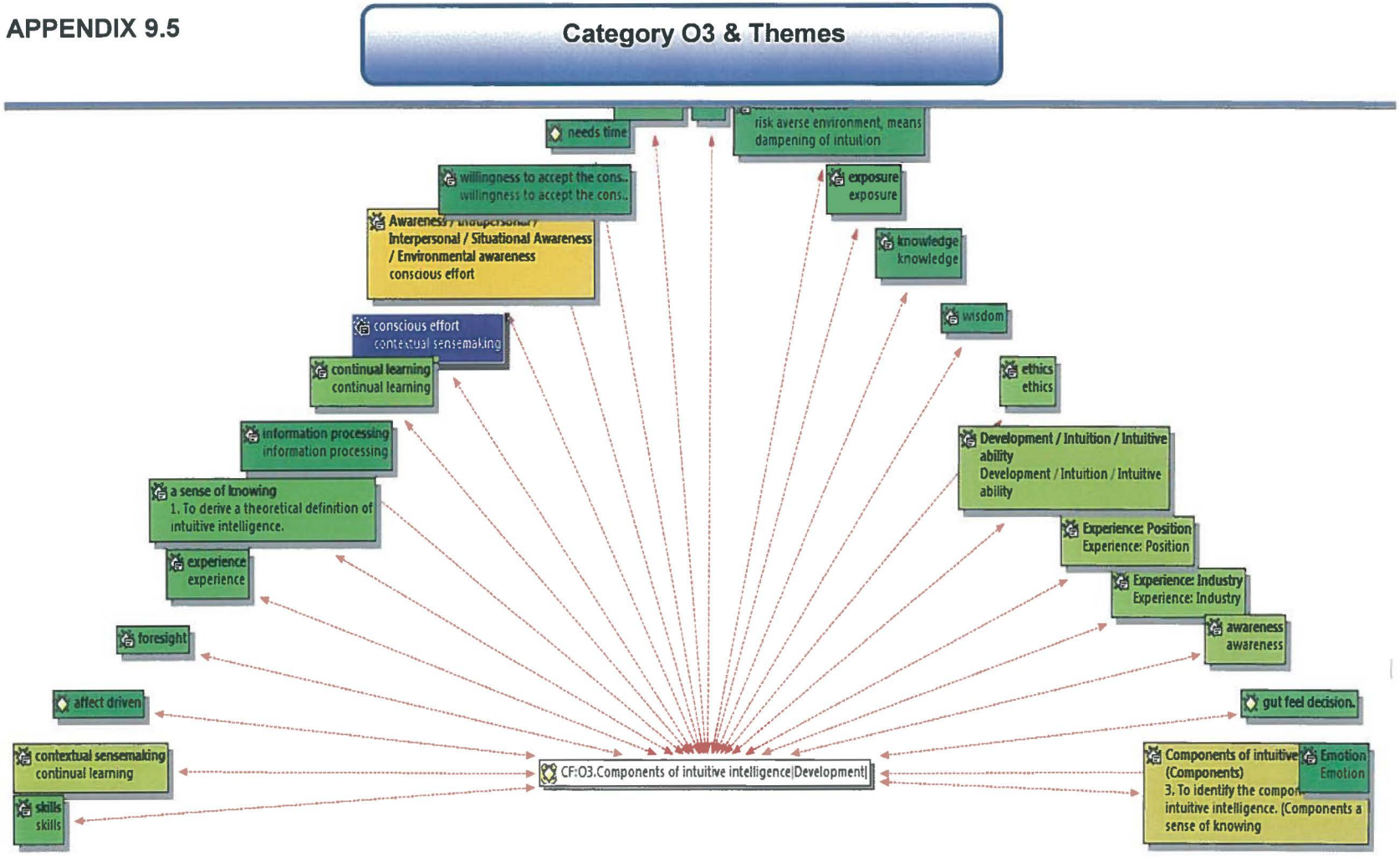


APPENDIX 9.4

Category O4 & Themes



APPENDIX 9.5


Category O3 & Themes
needs time
risk averse environment, means dampening of intuition
willingness to accept the cons..
willingness to accept the cons..
exposure
exposure
Awareness / Interpersonal / Situational Awareness / Environmental awareness
conscious effort
knowledge
knowledge
wisdom
conscious effort
contextual sensemaking
continual learning
continual learning
ethics
ethics
information processing
information processing
Development / Intuition / Intuitive ability
Development / Intuition / Intuitive ability
a sense of knowing
1. To derive a theoretical definition of intuitive intelligence.
Experience: Position
Experience: Position
experience
experience
Experience: Industry
Experience: Industry
awareness
awareness
foresight
affect driven
gut feel decision.
contextual sensemaking
continual learning
skills
skills
CF:O3.Components of intuitive intelligence|Development|
Components of intuitive
(Components)
3. To identify the compon
intuitive intelligence. (Components a
sense of knowing
Emotion
Emotion

APPENDIX 9.6

Category O2 & Themes